



**Japanese EV/PHV Report**

**Case Studies: Infrastructure  
for Charging Electric Vehicles (EVs)  
and Plug-in Hybrid Vehicles (PHVs)**

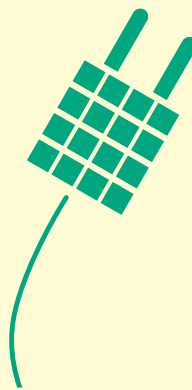
**17**

Example Cases  
by Industry



# Case Studies: Infrastructure for Charging Electric Vehicles (EVs) and Plug-in Hybrid Vehicles (PHVs)

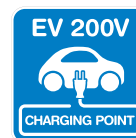
17 Example Cases by Industry



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# Making social contributions and improving customer services as the only Eco-First Company in the general merchandise industry

## UNY

### Aichi Prefecture and other locations

#### Growing needs for charging stations at commercial facilities

UNY operates APiTA and PIAGO supermarkets, mainly in the Chubu region. This company has promoted the installation of charging stations for electric vehicles (EVs) and plug-in hybrid vehicles (PHVs), starting with a regular charging station at the APiTA Chiyodabashi Store (Chikusa-ku, Nagoya-shi) in March 2010. As of October 21, 2013, it has introduced 19 regular charging stations and three rapid charging stations at 19 of its stores.

Chief Manager Atsushi Matsui (of the Group Environment and Social Contribution Department, Group Business Division) said, “In 2008 we were certified as an Eco-First Company by the Ministry of the Environment—the only company in the general merchandise industry to be given this honor. We have implemented a range of environmental activities since then. Consumer surveys indicated that many people hope for charging stations to be installed in commercial facilities, which we believe is very meaningful from the viewpoints of social contribution and improving customer service.”

#### Charging stations at some stores are used more than 100 times per month

Customers can use these charging stations at no cost for up to two hours. The users are well versed in charging procedures, so the stations are being operated in a favorable way; there have been



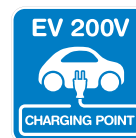
The charging stations can be immediately used by anyone who has completed simple procedures at the service counter of each store before their first usage. Charging is free for up to two hours at APiTA and PIAGO stores.



absolutely no troubles or complaints so far.

“EVs and PHVs are rapidly coming into widespread usage,” said Chief Manager Matsui. “Since the beginning of 2013, the charging stations at some stores are being used more than 100 times per month. The stations are installed in the most visible locations at each store, which enhances customer

recognition—we also think this has led to an increased number of repeat customers. Being able to easily charge their vehicles while shopping provides enjoyment and peace of mind to customers, who don’t need to worry about running out of electricity. I expect that demand will only grow in the future in order to offer greater convenience to customers.”



# Effectively utilizing natural energy to play a central role in a city where EVs are rapidly coming into widespread usage

## Terrace Mall Shonan

### Kanagawa Prefecture

**An average of 100 vehicles per month use this mall's charging stations as the number of EV and PHV owners increases**

Terrace Mall Shonan, a shopping mall in front of JR Tsujido Station, was equipped with two regular charging stations when it was opened in November 2011. Anybody can start using these stations for free at any time, just by completing simple procedures at the mall.

General Manager Katsuhiko Sato (of the Terrace Mall Shonan Office, Sumisho Urban Kaihatsu Co., Ltd.) said, "We decided to introduce charging stations because we thought they will be required for the commercial facilities of the future due to the growing need for customers to charge vehicles while they are shopping or dining. They are used roughly 100 times per month at present, a number that is on a trend of increase."

Compared to the rest of Japan, Kanagawa Prefecture is one region with the most ample infrastructure for charging electric vehicles (EVs) and plug-in hybrid vehicles (PHVs). The number of EV and PHV owners in the prefecture increased by more than 60% from the end of FY2011 to the end of FY2012, and it is expected that these vehicles will come into even more widespread usage in the future.

### Charging via solar power generation at an environmentally friendly shopping center

Terrace Mall Shonan is also aiming to be a shopping center that



Charging stations installed on the rooftop parking area are connected to a solar power generation system. Many people use these stations every day.

is kind to the environment; the charging stations utilize privately generated electric power from a solar power system, which reduces maintenance costs. In addition, electric power generated via a wind power system is used to light the parking area. In these and other ways, this mall is proactively introducing measures in consideration of the environment.

"I believe that commercial facilities are not just for providing products and services," said General Manager Sato. "Rather, our mission is to fulfill

a central role in our city. This includes our environmental initiatives, one facet of which is our installation of charging stations. Terrace Mall Shonan is a commercial facility that is required to function as a regional base. In the future it will be important for us to take part in facility management—including concern for the environment, as demonstrated by these charging stations—while paying attention to the special characteristics of the region."





# Working with governments to lead environmentally conscious initiatives in the tourist destination of Yokohama

## Yokohama Motomachi Shopping Street Association

### Kanagawa Prefecture

#### Installing an advanced, multi-story parking garage where customers can charge their cars while shopping

Yokohama Motomachi Shopping Street is a lively shopping district with many customers that represents the tourist destination of Yokohama. The Yokohama Motomachi Shopping Street Association that serves a central role in its administration makes proactive efforts related to the environment. For example, it installed charging facilities for electric vehicles (EVs) in the Motomachi No. 1 Parking Area (Naka-ku, Yokohama-shi) as far back as 2000.

In 2011 this parking area was remodeled into a multi-story parking garage with facilities to charge parked EVs and plug-in hybrid vehicles (PHVs). It is the second elevator-type parking facility that is equipped with charging functions in Japan.

Director-general Yoshihito Yamada said, “As EVs and PHVs are coming into widespread usage, we feel that parking areas with charging stations allow customers to enjoy shopping and sightseeing with peace of mind. People who visit by car are able to purchase more than customers coming by train or bus, so we expect this will contribute to increased sales and greater vitality for the entire shopping street.”

#### Promoting the “Eco Street” concept in collaboration with the government for increased vitality

Based on the concept of an “Eco Street,” the Yokohama Motomachi



Electrical power sockets are located to the front and rear of the parking palettes. Charging starts automatically after connecting the charging cable and parking the car, and is provided at no charge. The association aims to expand the usage of EV car sharing to local citizens as well.

Shopping Street is promoting the creation of towns that are kind to people and the environment alike. It has carried out a series of advanced initiatives, such as becoming the first individual shopping street in Japan to use natural gas trucks for cooperative distribution, as well as the introduction of EV car sharing.

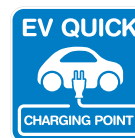
“In addition to improving the image of the Yokohama Motomachi

Shopping Street Association,” Director-general Yamada said, “we have placed importance on concrete measures that are beneficial to our visitors. In the future we will cooperate with governments—such as Kanagawa Prefecture and the City of Yokohama—to serve as a leader for Yokohama’s environmentally conscious initiatives.”

## Providing charging facilities as one facet of convenience store infrastructure

LAWSON

Tokyo and other locations



### A wide range of subsidies provides favorable backing for corporations to install charging facilities

The LAWSON Group operates approximately 11,500 convenience stores throughout Japan. LAWSON is promoting the introduction of electric vehicles (EVs) and charging facilities as one facet of its regional infrastructure services and efforts to reduce its environmental burden.

Senior Manager Hiroyasu Fukada of the Social Coexistence Office said, "We introduced EVs in 2009 for store visits by supervisors (providers of administration guidance). We also began installing charging facilities at the same time. As of today, we have installed 12 charging stations throughout Japan for usage by general customers. There is concern that the number of gas stations will drop due to Japan's declining population in the future, so the provision of charging facilities as a part of infrastructure may become a social mission for convenience stores. In addition to subsidies from the national and local governments, four automobile manufacturers have started new support systems. I feel this is an ideal time for corporations who are considering the installation of charging stations."



Many repeat customers who are local residents use charging stations at convenience stores in urban areas (the photograph shows the Oi Store). Stores near sightseeing attractions and on major roads are often visited by people who wish to stop and charge their vehicles.



## Report 5 Restaurant



## Establishing a new business style that allows customers to fully charge while dining, linking food and kindness to the environment

Kanagawa Prefecture and other locations

Bikkuri Donkey



Usage of the charging station at the Aobadai Branch has increased steadily since its installation in October 2012. At present it is utilized around 60 to 70 times per month, mainly by repeat customers.



### Promoting infrastructure with a focus on the length of customer visits

Bikkuri Donkey is a major Hamburg steak chain with over 300 restaurants across Japan. This restaurant installed one rapid charging station each in the parking areas of its Aobadai Branch (Yokohama-shi, Kanagawa Prefecture) and Mizuho Branch (Nishitama-gun, Tokyo). These stations are open to the public during business hours (fees apply). While many restaurants are becoming equipped with regular charging stations, Bikkuri Donkey decided that rapid charging stations were a better match since they offer greater convenience to customers by allowing them to charge their vehicles over a short period of time while dining.

Aleph-inc. Eco Team Leader Takahiro Sasaki said, "We believe that establishing electric vehicle (EV) infrastructure is an issue in the food industry, which has strong ties with agriculture and the environment. That's why we introduced charging facilities. The number of EV owners is increasing steadily; we will make proactive efforts to expand our infrastructure in the future as well in tune with social trends and the proliferation of next-generation vehicles."



## Blazing new trails beyond charging for service stations in the multifaceted EV business

Chizu Sekiyu

Tottori and Shimane Prefectures



### Proactively utilizing subsidies to fulfill new needs

Chizu Sekiyu offers comprehensive car-related services in Tottori and Shimane Prefectures, including refueling, charging, vehicle inspections, car rental, and automobile sales. Among these, its electric vehicle (EV) rental and car sharing services are overwhelmingly popular. On many days all 11 of its EVs are being operated, mainly by business customers. In particular, there is a great need for car sharing by people who have been transferred to new jobs and do not own vehicles.

Tsuyoshi Sawa of the Sales Department said, “We are able to offer these low-priced, high-quality services by making maximum usage of subsidies. We also used subsidies for our charging facilities, which have been introduced to eight branches in eastern Tottori. We have effectively expanded our charging infrastructure by cooperating actively with the national and local governments; this has also led to new opportunities in the service station business.”



A regular station has been installed at the Chizu Sekiyu South Station (Tomiyasu, Tottori-shi). Chizu Sekiyu is also considering the establishment of branches equipped with solar power generation facilities and rapid charging stations in the future.



## Cooperating with the government to create next-generation service stations equipped with a wide range of energy facilities

Hokkaido

HOKKAIDO ENERGY

### Opportunities for new services combining charging and car washing

HOKKAIDO ENERGY possesses multiple service stations in Hokkaido. It promptly introduced charging stands in cooperation with the prefectural government; at present, three branches in Sapporo and one in Asahikawa are equipped with regular and rapid charging stations. In this way, HOKKAIDO ENERGY has acquired regular customers who visit to take advantage of services that can only be offered at service stations—many people use these charging stations before having their cars washed on their days off.

Masahide Minami of the New Energy Division said, “Because Hokkaido is an automobile society, the charging infrastructure must be enhanced. Subsidies from the national government can be used for installation costs in addition to actual charging equipment, so I expect that the infrastructure will be expanded to a further degree. In the future we will increase our facilities in zones with no charging stations, focusing on major roads. At the same time, we are aiming to construct full-scale service stations that serve as sales bases for a broad range of energy, including compressed natural gas (CNG) and hydrogen.”



The charging stations installed at Challenge Nagayama Minami (Nagayama-cho, Asahikawa-shi) in May 2013 was available at no charge during its first year, which is one reason for the large number of customers every day.





# Successful differentiation in a new region where the bank opened its first branch via environmental consideration and customer services

## The Saitamaken Shinkin Bank

### Saitama Prefecture

#### Free charging for drivers contributes to an increased degree of recognition for the new branch

The Saitamaken Shinkin Bank has many branches in Saitama Prefecture, including the Kawaguchi Asahi Branch (Asahi, Kawaguchi-shi) that was opened in May 2013 as the bank's first branch in Kawaguchi City. At the time of the branch's opening, a fast-charging station for electric vehicles (EVs) was installed in the parking area in front. In addition to the branch's customers, drivers in general can also use this charging station for free. Because it is located on a busy road, the station has become very popular.

Acting Branch Manager Kenichi Sawada said, "There are still few financial institutions with charging stations, so we have received many comments from customers saying they appreciate being able to charge their vehicle when visiting our bank, and hoping that more charging stations will become available. This has contributed to an increased degree of recognition for the new branch."

#### An environmentally friendly branch provides management hints

To differentiate itself from competitor financial institutions, the Kawaguchi Asahi Branch has adopted the concept of "consideration for the environment." Solar panels have been installed on the rooftop, and electric power for the branch is supplied via private



The charging station in front of the branch, which is highly visible from the road, can be used for free by customers and drivers passing by. The electric power for the branch is provided via private power generation using the solar panels on the rooftop.

power generation. Moreover, this branch proactively implements initiatives to decrease its burden on the environment, such as selecting EVs for its sales vehicles.

Takashi Okubo of the Headquarters Management and Planning Department said, "In the future, financial institutions will not be able to survive merely by

accepting deposits and lending funds. It is important for credit unions to have deep roots in their communities, think together with their customers, and constantly implement initiatives that provide management hints. We are hoping to offer services not limited to the financial realm by establishing environmentally friendly branches."





# Reducing fuel expenses to one fifth by utilizing nighttime electric power, and making major contributions to CSR

## Sumitomo Mitsui Auto Service

Tokyo and other locations

### A rule about charging from evening to morning ensures smooth operations

Sumitomo Mitsui Auto Service is a major vehicle leasing company with 47 locations across Japan. It entered the electric vehicle (EV) leasing business in 2009, when it also introduced EVs as cars for advertising, demonstrations, and sales activities. This company has also installed regular charging stations in the parking areas of locations with EVs.

Takehiko Osuga, director of the General Affairs Department, said, "EVs have smaller ranges than gasoline-powered vehicles, so we have created an in-house rule in which users charge the vehicles after returning to the company in the evening, ensuring that they are fully charged by the following morning. In this way, we have accomplished smooth operations with regular charging stands alone. Gasoline prices are rising steeply in recent years; we've reduced our monthly fuel expenses to one-fifth the price of gasoline-powered vehicles by utilizing nighttime electric power as well. Moreover, the overall running costs for our operations have been cut by approximately 50%. I think this is a significant initiative from the viewpoint of consideration for the environment as part of our corporate social responsibility (CSR)."

**Supplying electricity is simple even in rented buildings, as long as there are power sources and the owners provide cooperation**

Eight of Sumitomo Mitsui Auto



Sumitomo Mitsui Auto Service proactively uses EVs as sales vehicles for short trips to perform sales activities, as well as demonstrations and test drives for customers who are considering leasing an EV. The colorful wrapping also contributes to CSR and to promoting the company's EV leasing business.

Service's major locations throughout the country are currently equipped with EVs and charging facilities; three more will be added by the end of the year. These bases are mainly located in urban areas, where people tend to travel short distances. The company has also installed charging facilities in the parking areas that are rented on a monthly basis in its tenant buildings.

"It is simple to install charging facilities even in rented parking areas," said Director Osuga, "as long as there is a 200V power source and

the building owners and management companies provide cooperation. In the past we have used national subsidies to purchase EVs. At present, subsidies for the installation of charging stations in rented parking areas can be applied not only for purchases, but also for installation fees as well. This will dramatically reduce the burden of introducing charging stations. With lease contracts no initial investments are required, and the installation procedures and subsidy applications are very simple."



## Exploring new possibilities for environmental business with charging stations and EV leasing

### Aguru

#### Yamanashi Prefecture

##### Focusing on the environment in the contracted management of sports facilities

Aguru carries out a broad range of business—including vehicle leasing, tutoring schools, and the management of public sports facilities—in Fuefuki City, Yamanashi Prefecture. It introduced an electric vehicle (EV) mini truck as a company-owned car in June 2013. At the same time, Aguru rented part of a gas station in the city and installed one EV rapid charging station, which can be used by the public at no cost.

Managing Director Takao Nakagawa said, “In April 2013, we began managing public sports facilities in 10 locations throughout the city. We are considering introducing environmentally friendly EVs to be used as cars for traveling between these facilities. We hope that driving EVs will become more convenient in the region, and that usage of EVs will expand in vehicle leasing—our main business. Based on this, we installed the city’s first charging station at a gas station.”

##### Expanded charging facilities open up new business possibilities

Aguru proactively uses its EV mini truck for demonstrations to local farmers and government officials, for which it is drawing a great deal of attention.

“We entered into a lease to install the EV mini truck and charging stand,” said Managing Director Nakagawa, “and we were able to use national subsidies for the purchase



Aguru rented one part of a gas station to install a charging station and for demonstrations with its EV mini truck. The EV mini truck can also be used as an outdoor power source by inputting the charged electric power into a power box.

fees. Moreover, subsidies can also be used for installation fees in some cases, which offers many benefits to corporations who are considering installation. In the local community it is normal for one household to own two or three vehicles. Environmentally friendly initiatives are important for this reason, and increasing numbers of citizens and

government officials are becoming interested each year. One issue with EVs is that they have short ranges, but this isn't a problem if there is sufficient charging infrastructure at homes and in the region. I expect that new business possibilities will arise in the future as we increase our number of charging stands, such as by offering them as a paid service.”





# Installing 21 charging stations with the support of a hot spring hotel cooperative to create Japan's most preeminent “eco hot spring”

## Ikaho Onsen

### Gunma Prefecture

**A total of 20 inns have installed charging stations via subsidies and support from the hotel cooperative**

Ikaho Onsen is a hot spring area located within two hours from central Tokyo. In October 2013, regular charging stands were installed simultaneously at 20 of the region's 50 ryokan (Japanese-style inns). This was an effort to further improve convenience for users of electric vehicles (EVs), based on the decision to install rapid charging stations at seven service and rest areas on the Kan-Etsu Expressway by the end of FY2013. In order to reduce the burden on individual ryokan, backup was provided by the Ikaho Hot Spring Hotel Cooperative and other parties.

Chairman Tomohide Fukuda of the Ikaho Hot Spring Hotel Cooperative said, “We had already installed one charging station at our visitors Center. However, we broadened this initiative to Ikaho Onsen as a whole to take advantage of the chance to receive subsidies for installation costs as well as purchasing. In the future we will cooperate with the government to proactively expand our infrastructure, with the aim of drawing people to this hot spring area.”

**Considering new ways to utilize infrastructure as an advanced, environmentally friendly region**

Now that Ikaho Onsen is equipped with charging infrastructure, its next objective is ensuring convenient travel from

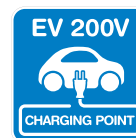


Improving the convenience of travel is essential in Ikaho Onsen, a town with stone steps. There are many benefits to using EVs, which offer good maneuverability. A decision has been made to install three additional regular charging stations and two rapid charging stations; the cooperative also hopes to enter the EV car sharing business.

Shibukawa Station and within the region. To that end, the cooperative is considering measures such as purchasing EVs and entering the EV rental business.

“In addition to providing charging services for customer vehicles,” said Chairman Fukuda, “we hope to explore new possibilities as an advanced, environmentally friendly hot spring area, including holding ‘eco car rallies’ and other events that make use of this infrastructure.

Ikaho Onsen is implementing a wide range of initiatives related to the environment, such as bamboo lantern processions and a carbon offset model project. I think that ‘fine arts’ and ‘environmental friendliness’ will be key phrases for the future success of tourist destinations—which will require cooperation from travel agencies as well as tourist areas. I look forward to the development of travel products utilizing EV infrastructure in the future.”



## A golf course improves its image as an environmentally friendly corporation and works to improve customer service, even eyeing the possibility of EV bus introduction

### Sanko 72 Country Club, Sanko Shoji

#### Gunma Prefecture

#### Installing essential facilities for future golf courses in just two months

Sanko 72 Country Club is one of Japan's largest golf courses, with standard courses (63 holes) and a short course (nine holes) for a total of 72 holes. It installed five regular charging stations in the parking area in March 2012.

"We decided to install these charging stations," President Kinichi Teramoto said, "because we predicted that society will certainly shift towards electric vehicles (EVs) in the future. In addition, club members told us they were considering purchasing plug-in hybrid vehicles (PHVs), and asked if we were planning to install charging stands. We believed these will become essential facilities for golf clubs in the future, so we completed the installation after two months."

#### Expanding the utilization of EVs that are quiet and kind to the environment

This country club is patronized by approximately 700 golfers per day, who drive roughly 600 cars. The usage of these charging stations has increased on a constant basis since they were installed.

President Teramoto said, "We are located around 100 kilometers from Tokyo. These charging stations are highly evaluated by our customers because they can charge their vehicles for the return trip while playing golf, which is convenient and provides peace of mind. The number of repeat customers is growing favorably. At present we



Sanko 72 Country Club is receiving increasing requests for interviews about its charging facilities. These charging stations are serving to help promote the club, and are also one facet of its corporate social responsibility.

allow members to use these stations for free, and charge guests 500 yen for three hours. In the future we are considering making usage free for all visitors in order to improve customer service."

He also commented, "No noise being audible from the golf course and environmental friendliness are both important points. We used to

use carts fueled by diesel oil on the courses, but we have mostly switched to electric carts. Our club utilizes buses to provide pick-up and drop-off services to the train station, and also for travel between courses. In the future we are considering the adoption of EV buses, which will likely broaden the usage of charging stands to a greater degree."



## Supporting people who are considering an EV purchase with free charging via cooperation between the government and a tourist association

Aso Farm Land

Kumamoto Prefecture



### Becoming part of an EV test drive course to serve as a base for sightseeing and charging in Aso

Aso Farm Land is a “health theme park” visited by four million tourists each year, which is especially popular for its dome-shaped lodging facilities and opportunities to experience nature. It began collaborating with Kumamoto Prefecture to install a rapid charging station in March 2011, which is used every day and is available to the public for free as one facet of the facility’s services.

A representative of the Planning and Advertising Department said, “A large number of people use the charging stands on weekends, public holidays, and during the tourist season, but guidance is provided and everyone cooperates to smoothly take turns. This facility is also part of the Minamiaso Village Tourist Association’s EV Sightseeing Test Drive Course, and many people want to experience the charging process. With leadership from the prefecture, electric vehicles (EVs) are coming into more widespread usage due to both infrastructure improvement and the promotion of these vehicles. We will continue making proactive contributions in the future as well.”



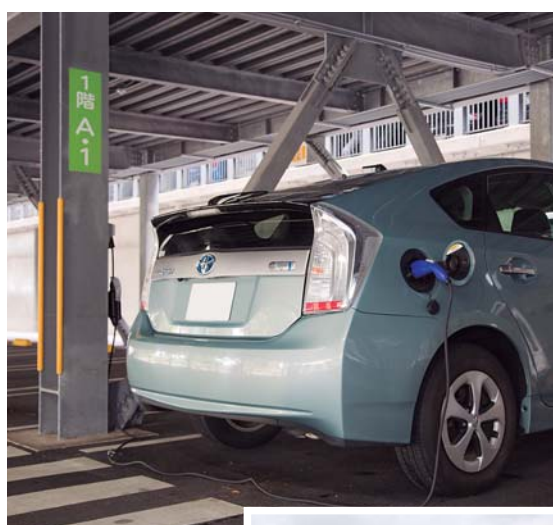
The charging station is installed in the exclusive parking area for staying guests, but can also be freely used by other persons as well. In some cases, people who are considering the purchase of an EV use the tourist association’s test cars to experience the charging process while sightseeing.



## Offering 15 charging stations for free to improve convenience for tourists traveling by rental EVs and PHVs

Okinawa Prefecture

Okinawa Churaumi Aquarium



The charging stations are located in the parking garage of the Ocean Expo Park. Okinawa boasts a high penetration rate for infrastructure compared to the rest of Japan, with a favorable system for the acceptance of EVs and PHVs.



### The aquarium serves as a stopping point for charging—its facilities are used by roughly 60 vehicles per month

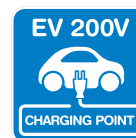
Okinawa Churaumi Aquarium is a popular sightseeing spot in Okinawa. In 2012, 15 regular charging stations were installed at the Ocean Expo Park where the aquarium is located. These charging stations are available at no cost to visitors as one part of the aquarium’s services; last year they were used by an average of 60 vehicles per month, mainly tourists who rent electric vehicles (EVs) or plug-in hybrid vehicles (PHVs) after arriving at the airport.

As many tourists from different areas choose to travel by rental car, Okinawa Prefecture is making proactive efforts to promote the usage of EVs and PHVs and completing infrastructure improvement to that end. There are many charging stations between the airport and Ocean Expo Park—a distance of more than two hours. Consequently, facilities near the park are also installing rapid charging stations. On average, visitors to the Ocean Expo Park tend to stay for around two to three hours. Many people efficiently charge their vehicles while sightseeing, and then head to their next charging spot. These efforts will likely lead to the even more widespread usage of EVs and PHVs in this tourist destination equipped with charging infrastructure.

## Improving convenience for residents and becoming a new symbol of the city via integrated infrastructure

Park City Kashiwanoha Campus

Chiba Prefecture



### EV car sharing that anyone can easily take part in

Park City Kashiwanoha Campus is a condominium located in front of Kashiwanoha-campus Station on the Tsukuba Express. As one facet of new urban development, this condominium is implementing an electric vehicle (EV) car sharing program. A part of the coin-operated parking area right next to the condominium has been made into a dedicated parking lot for shared cars and equipped with charging infrastructure. In addition to residents, it can be used by anyone who becomes a member of the program.

Hiroshi Urano of the Mitsui Fudosan Kashiwanoha Campus City Project Development Planning Department said, "We have established five bases and adopted an 'urban-style' sharing program in which people can use cars for one-way trips. Users are charged in 15-minute increments, leading to praise for this program's ease of use. Many people use it for purposes such as shopping or to drop off and pick up their children from kindergarten. At present, we are considering the installation of rapid charging stations for general users. I feel that providing more opportunities for condominium residents to encounter EVs will lead to more widespread usage of these vehicles throughout the entire city."



The largest demographic in Kashiwa City, Chiba Prefecture is people age 35 to 44, and this condominium's urban-style EV car sharing program is very popular. Three EVs are currently available, and are put into full operation on most days. For this reason, requests for the introduction of more EVs have been received.

Report 16  
Roadside Station

## Creating environmentally friendly tourist spots with many benefits to visitors, who can charge while dining or shopping

Shizuoka Prefecture

Michinoeki Fujiyama

### An optimum location for charging that is popular with senior users

One rapid charging station for electric vehicles (EVs) was installed in April 2013 at two roadside stations in Oyama-cho, Sunto-gun Shizuoka Prefecture. This area is home to sightseeing spots including the Fuji International Speedway and Fuji Cemetery, which is surrounded by lush nature.

Yoshihiro Ikeya of the Oyama Town Office's Planning and General Affairs Department said, "We installed the first charging facilities at roadside stations in Shizuoka Prefecture to commemorate the 100th anniversary of the organization of Oyama, and because we endorsed the prefecture's vision of installing 500 charging stations by the end of FY2013. We are aiming to create environmentally friendly sightseeing spots where visitors can enjoy views of Mt. Fuji, a UNESCO World Heritage Site."

The charging stations can be used at no cost. Currently, the charging station at Michinoeki Fujiyama is used around 60 times per month.

Manager and Station Master Mitsuo Muto of Michinoeki Fujiyama said, "Charging can be accomplished quickly while visitors are dining or shopping. If people stop by to charge their vehicles and then use the facilities during their stay, there will have been great benefits to installing the charging station. Because more than 80% of our customers are from Tokyo and Kanagawa, the roadside station is an optimum charging base. Senior customers are very concerned about the environment, so they are also interested in EVs and charging stations."



Subsidies from the national and prefectural governments were utilized to purchase the charging stations. This helped keep costs down with an eye towards future expansion.





# Increased visitors, including from outside of the city, bring vitality to the tourism industry by visiting facilities while charging

## Municipal parking areas in Mutsu City

### Aomori Prefecture

**Twice as many users as the last fiscal year also contribute to sales of food and souvenirs**

Mutsu City, Aomori Prefecture is home to popular tourist attractions such as Mt. Osore and Yagen Onsen. This city began equipping municipal parking areas with electric vehicle (EV) charging stations in FY2011 as part of a three-year infrastructure project. One rapid charging station is installed each year, for a total of three charging stations.

Tomofumi Araya of the Planning and Coordination Division said, "We are installing charging stations in the parking areas of tourist destinations with many visitors so they can sightsee in the city via electric vehicles (EVs), which have short ranges, and also as an effort to realize a 'low-carbon society.' They are available at no cost. When the charging stations were first installed, they were used around two times per month. However, today some of these stations are utilized more than 10 times per month, and the number of users has doubled compared to the previous fiscal year. Synergetic effects have also been accomplished with other services. For example, charging stations in parking areas next to sightseeing spots allow people to dine or purchase souvenirs while their vehicles are charging."

### Utilizing national subsidies to enhance installation at tourist destinations

During the current fiscal year, charging facilities will be installed



A rapid charging station was installed in the Mutsu City Event Plaza Parking Area next to Masakari Plaza at the Mutsu Shimokita Sightseeing and Local Product Building. There, visitors can charge their vehicles while enjoying local delicacies such as grilled shellfish with miso at the restaurant in the adjoining facility. A monitoring system has also been introduced so visitors can monitor the charging process while resting.

at the Okuyagen Landscape Park Parking Area. Together with the existing facilities at the Mutsu City Event Plaza Parking Area and Mutsu City Kawauchi Government Office Parking Area, this will complete the infrastructure plan.

"Up until now we have also utilized national subsidies to install charging stations," said Araya. "The applicable range has been further expanded to installation costs in addition to purchasing, which helps cut the

overall costs of these installations and brings major benefits. In the past, problems were posed by the large amount of electricity consumed by EVs on mountain roads between Mutsu City and popular sightseeing spots such as Mt. Osore and Yagen Onsen. By installing charging stations in the parking areas of tourist destinations, we have provided peace of mind to drivers. I also expect this will lead to an increased number of visitors who travel by EV."



## **Case Studies: Infrastructure for Charging Electric Vehicles (EVs) and Plug-in Hybrid Vehicles (PHVs)**

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Example Cases by Industry

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