Smart Transport
Electric Vehicle Demonstrations

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Ministry of Economy, Trade and Industry

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Japan's approach

Diffusion projections & Targets

	Projections (private-sector efforts)		Government Targets	
	2020	2030	2020	2030
Conventional Vehicles	**80% >**	**60-70%**	**50-80%**	**30-50%**
Next-Generation Vehicles	**< 20%**	**30-40%**	**20-50%**	**50-70%**
HEV	**10-15%**	**20-30%**	**20-30%**	**30-40%**
EV/PHEV	**5-10%**	**10-20%**	**15-20%**	**20-30%**
FCV	**Miniscule**	**1%**	**0-1%**	**0-3%**
CDV	**Miniscule**	**0-5%**	**0-5%**	**5-10%**

Policy for the diffusion of EV
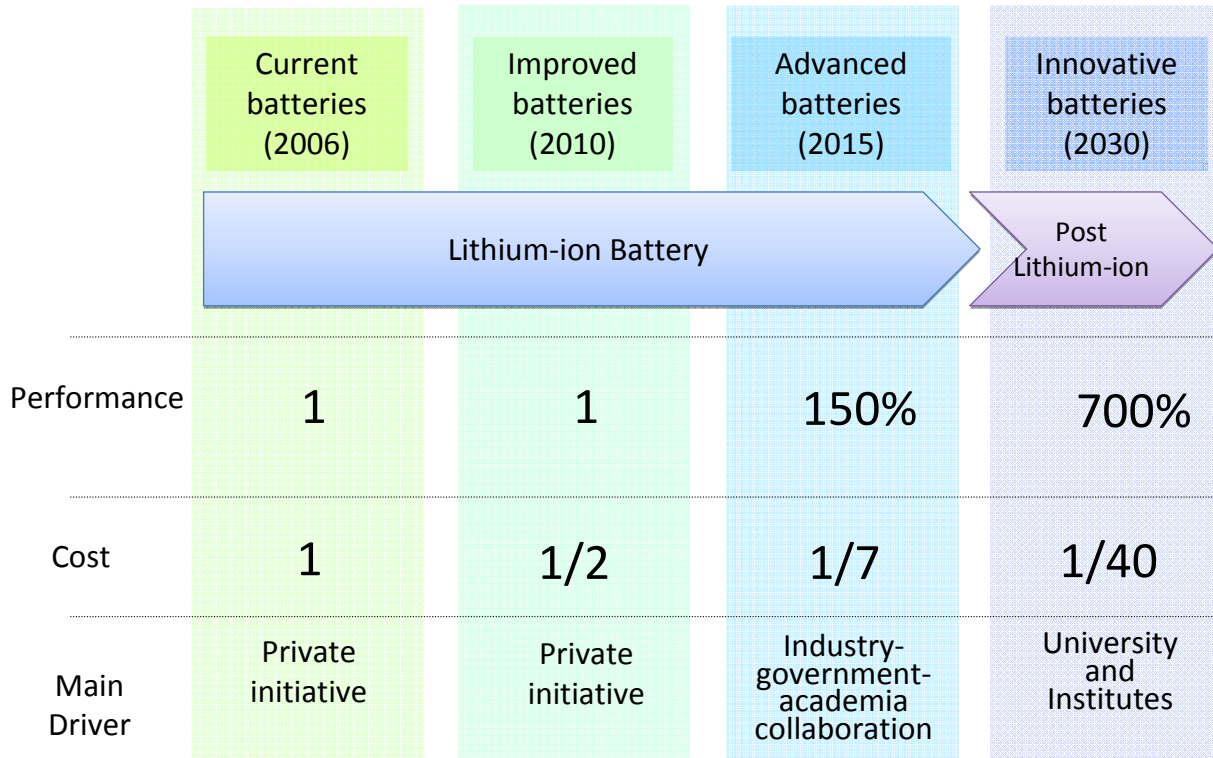
Budget in FY 2011

Battery

Development of advanced lithium-ion batteries	• US $40 million • 5-year project (FY 2007-2011)
Development of innovative (post-lithium-ion) batteries	• US $33 million • 7-year project (FY 2009-2015)

Infrastructure

Installation of infrastructure	• US $ 356 million • 1/2 of the charger price is subsidized

EV/PHV

Incentives for purchasing EV/PHV	• 1/2 of the difference between the prices of EV/PHV and their base vehicle is subsidized

※ Assumption: US $1= ¥75

Battery Technology Roadmap

	Current batteries (2006)	Improved batteries (2010)	Advanced batteries (2015)	Innovative batteries (2030)
	Lithium-ion Battery			Post Lithium-ion
Performance	1	1	150%	700%
Cost	1	1/2	1/7	1/40
Main Driver	Private initiative	Private initiative	Industry-government-academia collaboration	University and Institutes

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Targets of EV Charger installation:
How we deploy the charging infrastructure?

Targets for 2020

Normal Chargers (NC): 2 Million
Quick Chargers (QC): 5,000

> EVs should basically be charged by NC at night.
> A certain number of QC should also be installed as a "safety net".

How do we start?

At the Market Preparation Stage, we build infrastructure intensively and systematically mainly in EV/PHV towns

> Establish infrastructure development guidelines
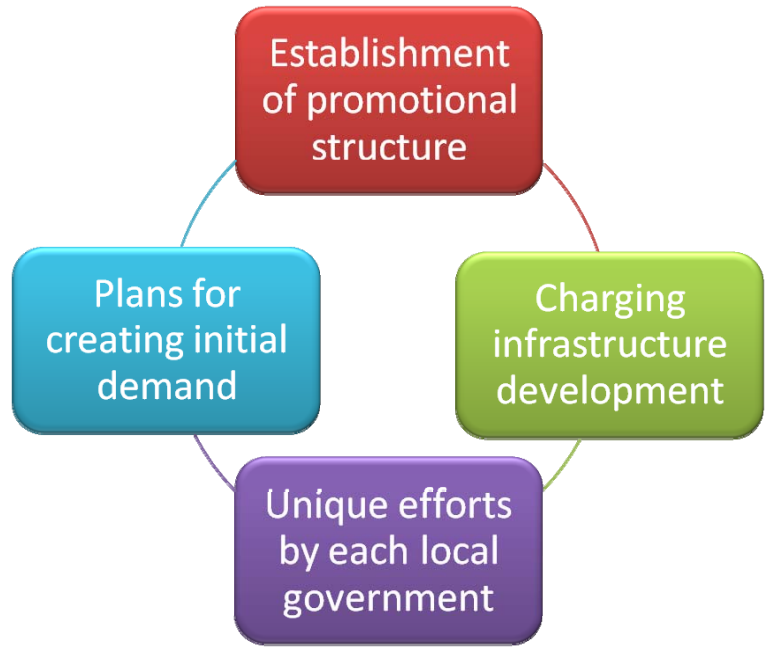> Compile EV/PHV town best practice handbook (including business models)

→ **Pave the way for the Diffusion Stage**
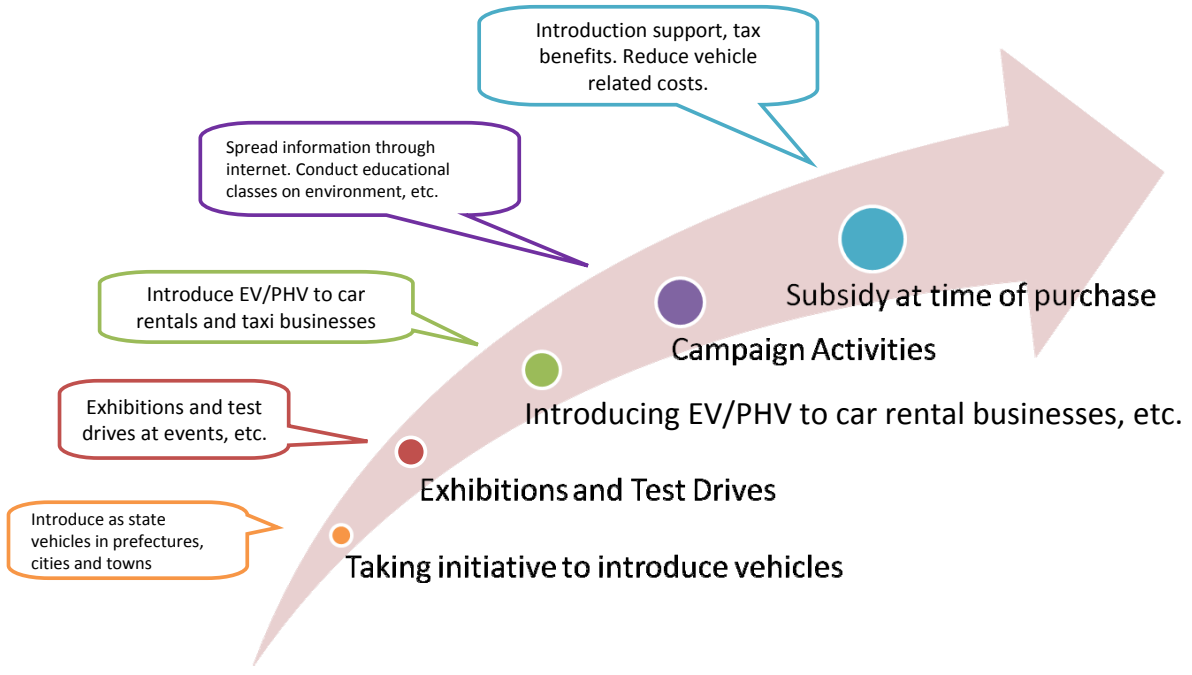
EV/PHV Town Concept Best Practices

> Put together "Best Practices" compiled from master plans from each EV/PHV towns as well as from interviews with each EV/PHV towns of advanced EV/PHV diffusion promotion efforts that will be of benefit to other local governments.

Items of Best Practices

Establishment of promotional structure

Plans for creating initial demand

Charging infrastructure development

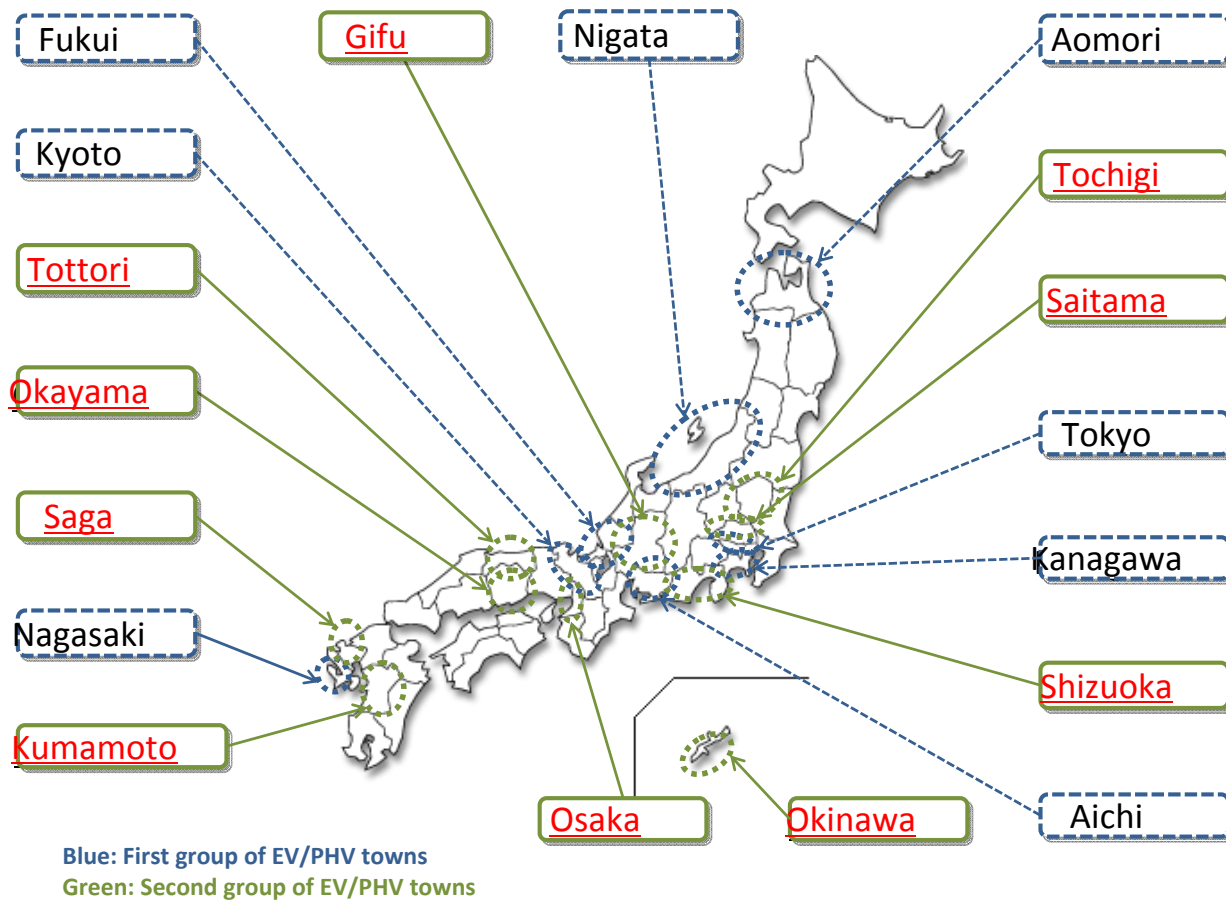Unique efforts by each local government
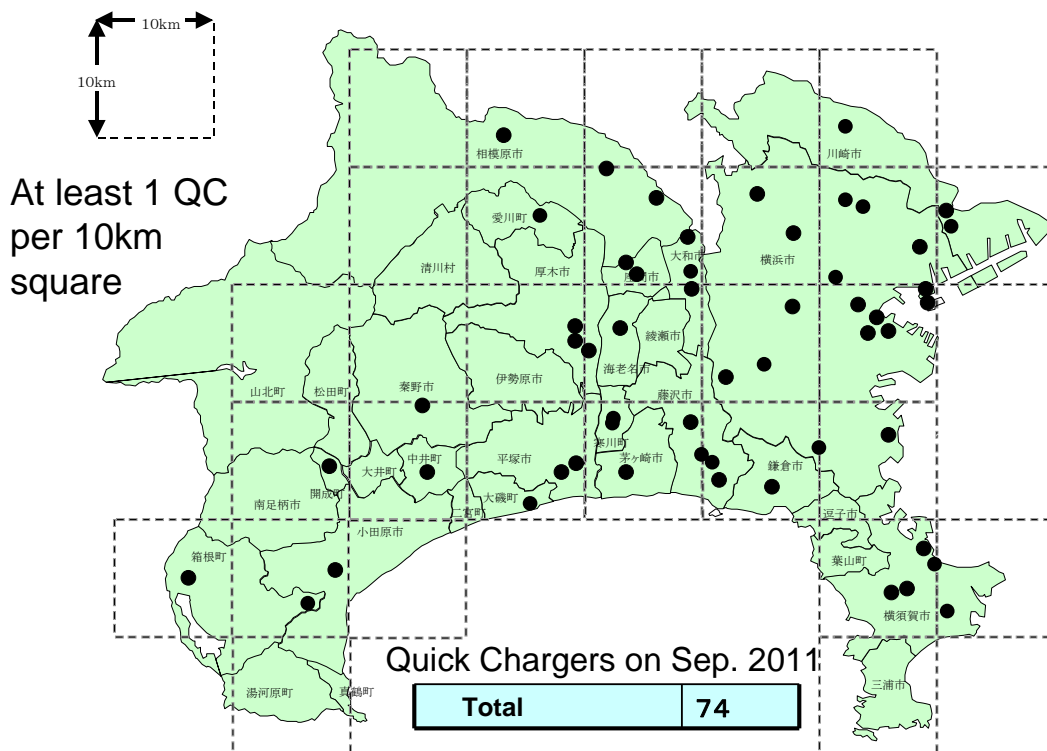

Creating Initial Demand in EV/PHV Towns

> To create initial demand, provide incentives to promote the introduction of vehicles, as well as improve recognition of local residents through wide usage of vehicles and combining various methods appropriate for each region's characteristics.

Introduction support, tax benefits. Reduce vehicle related costs.

Spread information through internet. Conduct educational classes on environment, etc.

Introduce EV/PHV to car rentals and taxi businesses

Exhibitions and test drives at events, etc.

Introduce as state vehicles in prefectures, cities and towns

Subsidy at time of purchase

Campaign Activities

Introducing EV/PHV to car rental businesses, etc.

Exhibitions and Test Drives

Taking initiative to introduce vehicles

EV/PHV Towns (Second group: Total 18 towns)

Fukui

Gifu

Nigata

Aomori

Kyoto

Tochigi

Tottori

Saitama

Okayama

Tokyo

Saga

Kanagawa

Nagasaki

Kumamoto

Shizuoka

Osaka

Okinawa

Aichi

Blue: First group of EV/PHV towns
Green: Second group of EV/PHV towns

Large-scale EV Deployment Area Model
(Kanagawa)

10km

10km

At least 1 QC
per 10km
square

Quick Chargers on Sep. 2011

Total	74

Towards Knowledge Sharing

SMART TRANSPORT: ELECTRIC VEHICLE DEMONSTRATIONS

Demonstrating advanced electric vehicle technologies that increase driving range, reduce charging times, enhance performance, and improve energy efficiency

Deliverables
1. Consistent database of information on electric vehicle technologies available within APEC

Participating Economies
● Canada ● Indonesia ● Japan (co-coordinator)
● Malaysia ● The Philippines ● Chinese Taipei
● United States (co-coordinator)

Coordinators
1. Develop a template for sharing information on electric vehicle demonstration projects, including an estimate of improvements
   - A. Range
   - B. Charging time
   - C. Performance
   - D. Efficiency
2. Develop a system for posting the information and selecting best practices.

Participants
Document electric vehicle demonstration projects in their respective economies, utilizing the standard template and providing additional detailed documentation for the estimated improvements in vehicle driving range, charging time, performance, and fuel efficiency.

Asia-Pacific
Economic Cooperation

Discussion Point

- How to bring cooperation by automobile companies

- How to develop a demonstration plan by each participating economies

- Time line

- A Template for sharing information on EV

- A system for Posting the information

Electric Vehicle Initiative

•Launched during the Clean Energy Ministerial in July 2010.
•EVI members agreed to share information on EV deployment targets and progress as well as best practices and policies.
•Outcomes of EVI can be shared among APEC economies.

EVI member countries