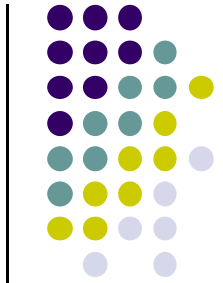
EV･PHV Town Symposium in Okinawa

Okinawa Initiatives

Challenges for Okinawa



① High dependency on motor vehicles: Approx. 86% of the modal share is private motor vehicles (compared to approx. 66% nationwide).

② Largest source of greenhouse gas emissions is transportation (29%), of which motor vehicles account for over 40%.

③ Urgent need for measures to fight global warming caused by motor vehicle use

Okinawa's Characteristics

① Island = Short transportation distance suitable for EV and PHV use

② Okinawa Island is long and narrow
= Charging point infrastructure can be developed effectively along major highways

③ Frequent traffic congestion
Travel speed during peak commuting hours in Naha City is slower than in central Tokyo, and worst in the nation.

Okinawa's Initiatives (Creating Initial Demand)

① Promote Park & Monorail Ride with EV rental car sharing in Naha City (a model project)

②Introduce EV buses to promote modal shift from private cars to public transportation

③ Promote EV awareness through test drive events

④Introduce EV at tourist facilities to promote ecology in tourism; Support introduction of EV rental cars

Okinawa Park & Monorail Ride Car Sharing (Model Project)

Concept of the Low Emission Vehicle (LEV) Car Sharing Promotion Program

Okinawa Prefectural Government (OPG)

- ●Promote car sharing to reduce cars entering the urban center and to reduce CO2 emissions.
  →Call upon residents to adopt car sharing for early attainment of program goals.
- ●New hiring and user questionnaire surveys for program implementation (sharing the initial cost burden required for commercialization; promoting employment)

Residents
(People living near the first and last monorail stops)

- **●Reduce CO2 emissions from the transportation sector by reducing private vehicle use for commuting and switching to public transportation**
- **●Use of LEVs (EVs) will promote a higher environmental awareness among their users.**

Becomes a well-established business at program completion

Car Rental Companies

- **●Implement the LEV car sharing program**
- **●New business creates new employment**
  →Car sharing becomes well established, expanding business

Car Sharing

【Going to Work】
- ●Drive a rental car to the station (★)
- ●Take the shuttle bus to Naha Airport (Akamine Station)
- ●Take the Yui-Rail to your place of work in Naha

【Going Home】
- ●Take the Yui-Rail to Naha Airport (Akamine Station)
- ●Take the shuttle bus to the station (★)
- ●Drive home on a rental car

Image

Concept of the LEV Car Sharing Promotion Program (JFY2011) (2)

Introduce EV buses to promote modal shift to public transportation
(EV bus development and test operation)

○ Promote global warming countermeasures in the transportation sector:
- Large-scale introduction of EV buses that do not emit global warming gases
- Increasing bus-users

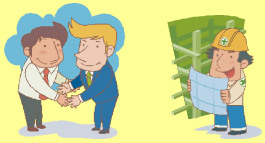
○Foster industries in Okinawa that meet the needs of the next-generation vehicles, such as EV alterations.

Implementation Plan

JFY2011

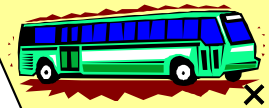
Trial production of one EV bus
(in cooperation with an experienced firm)

Foster & match local businesses (promote environmental businesses)



JFY2012

EV bus manufactured by a local firm (for a total of 2)



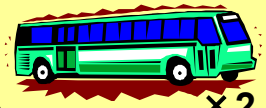
× 1 bus

Test operation of the bus manufactured in JFY2011 on select routes

※In cooperation with Naha City councils, etc.

【Concept】

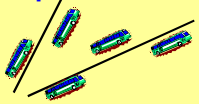
JFY2013



×2 buses

Incorporate two EV buses with focus on timely operation

【Concept】



JFY2014 - 2018

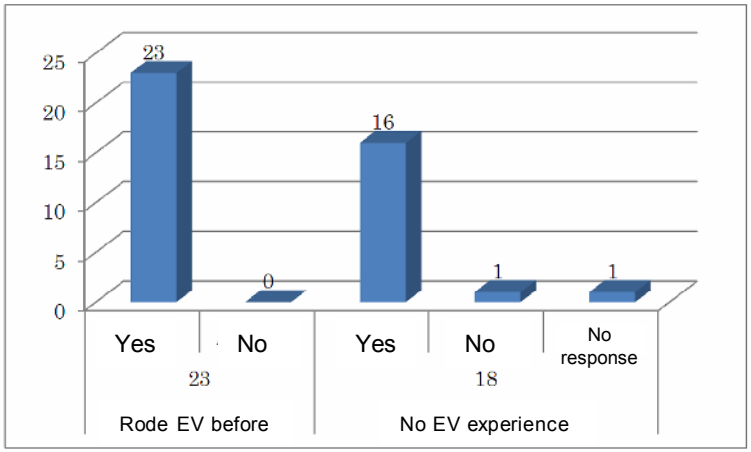
×2 buses

Currently coordinating with parties to continue test operation of the two EV buses


ガーシュ号
We love
OKINAWA

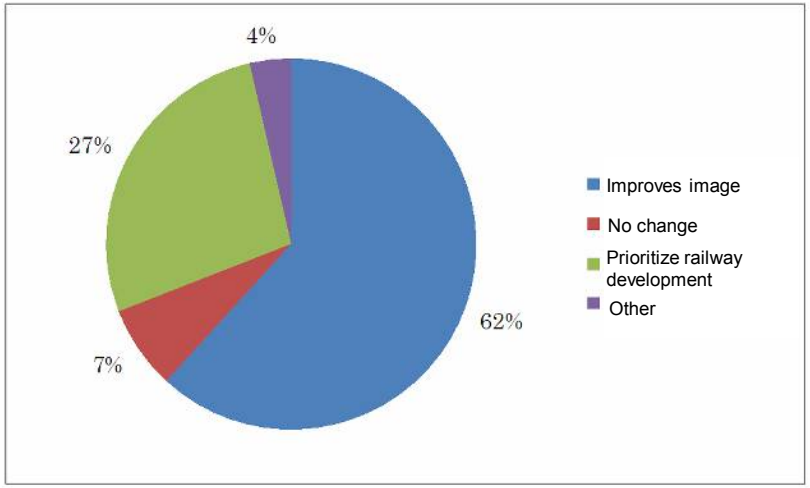
Questionnaire Survey at the EV Bus Demonstration Operation Symposium (March 2012)

• Do you want to ride the EV bus when it goes into service?



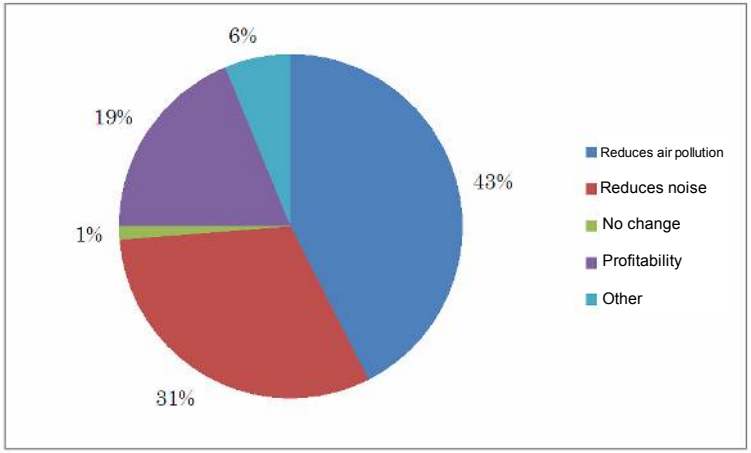
About half of the symposium participants had driven an EV before, indicating high EV familiarity among the general public. Regardless of any past experience driving the EV, many respondents wanted to ride the EV bus when it came on service.

• Impacts to Tourism



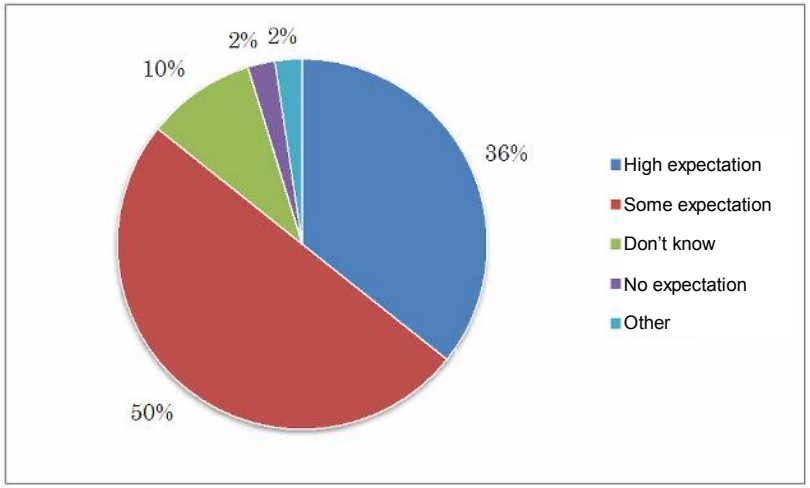
EV bus can be expected to enhance the image of a tourist destination; however some responded that development of railways such as LRT and BRT should be given greater emphasis.

• Benefits of Introducing EV Buses



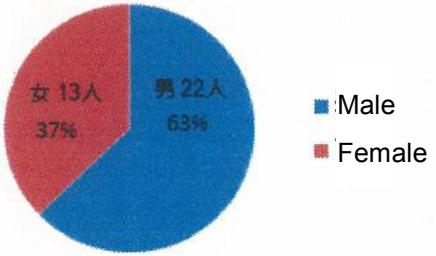
While expectations are high for environmental and noise mitigation; many expressed concerns over profitability.

• What expectations do you have of EV attracting related firms to Okinawa?

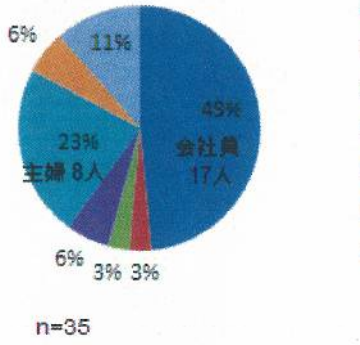


People have high expectations for EV as new industry

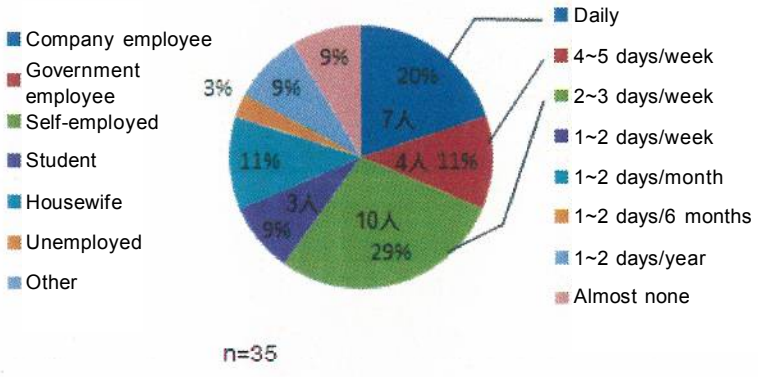
Questionnaire Survey During Demonstration Operation (1)



(a) Gender

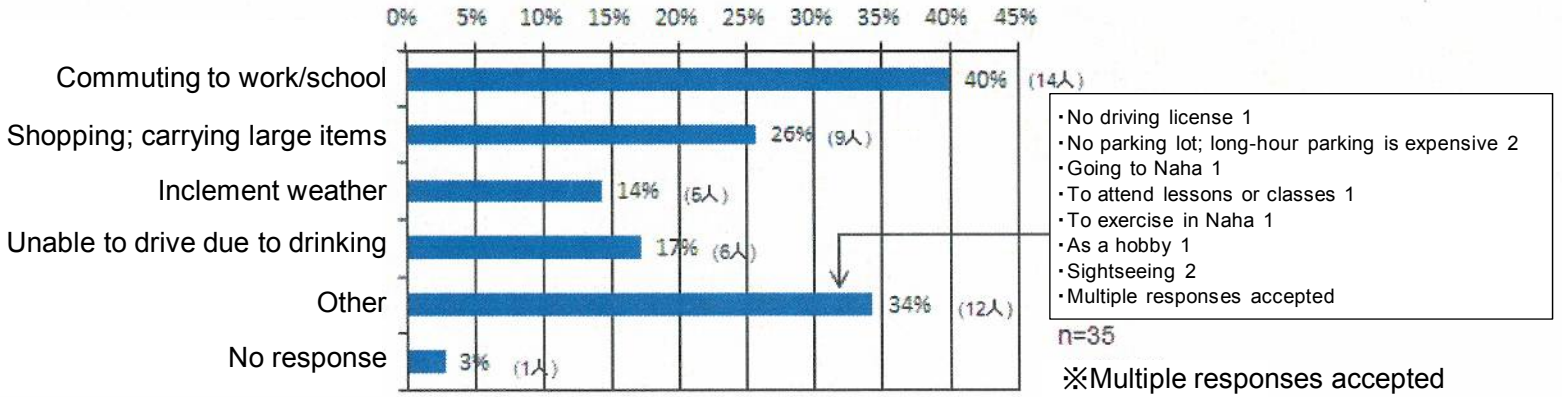


(b) Occupation



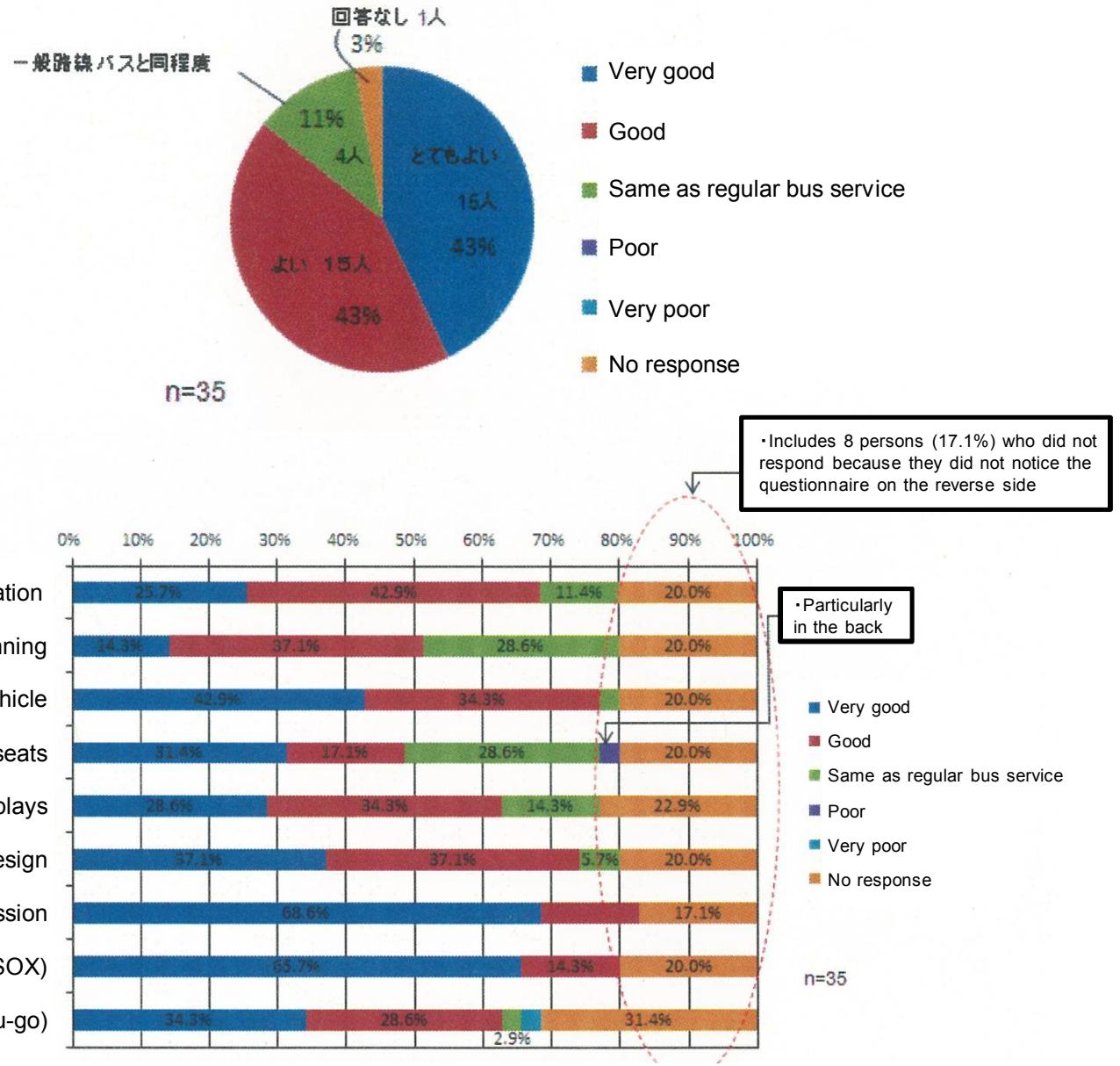
(c) Use of Regular Bus Service

Respondent Profile



Main Purposes for Using the Regular Service Buses

Questionnaire Survey During Demonstration Operation (2)



Promote EV Awareness through Test Drive Events

Eco Cars Available for Test Drive

A diverse lineup of eco cars!

FIT Hybrid

Hybrid vehicle offering both convenience and high environmental performance.

Courtesy of Okinawa Honda Corporation

Freed Spike Hybrid

Versatile, multipurpose space now available in a hybrid car. Enjoy active life.

Courtesy of Okinawa Honda Corporation

New Wagon R

A new generation eco car equipped with "ene-charge," a unique technology to regenerate deceleration energy, and "new idling stop system".

Courtesy of Suzuki Jihan Okinawa Corporation Inc.

Smart fortwo electric drive

A new generation mobility vehicle achieving harmony among people, cars and the natural environment, with quiet acceleration and over 140 km of continuous driving (NEDC).

Courtesy of Yanase & Co., Ltd.

E350 Blue TEC Station Wagon Avant-Garde

A diesel engine station wagon equipped with the state-of-the-art direct injection system and highly efficient turbo charger to achieve superior environmental conformance combined with exceptional performance.

Courtesy of Yanase & Co., Ltd.

Nissan Leaf

EV operates on 100% electricity and zero gasoline, and gives off no CO_2 emission.

Courtesy of Ryukyu Nissan Corporation

i-MiEV (Electric Vehicle)

EV operates on 100% electricity and zero gasoline, and gives off no CO_2 emission.

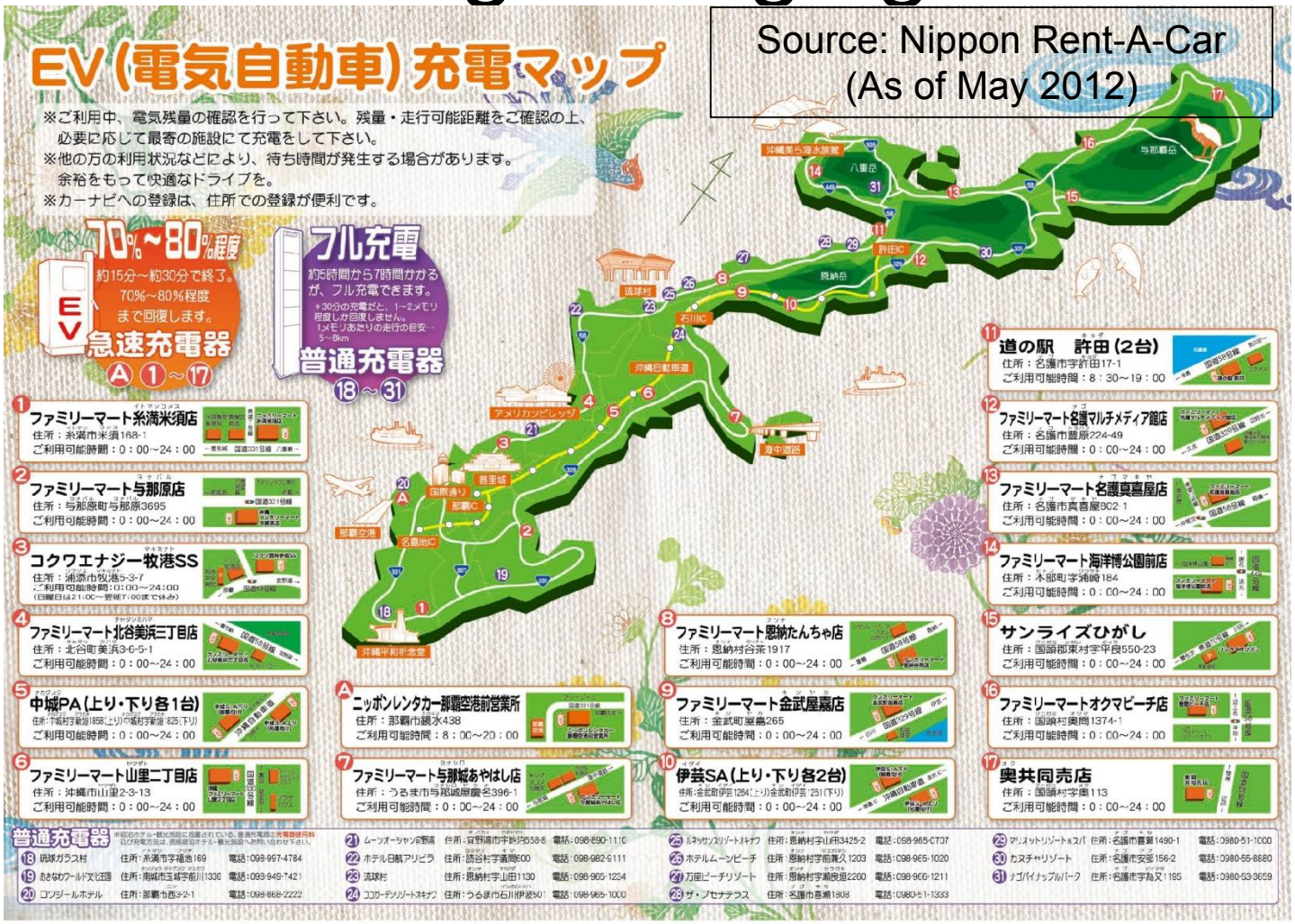
Courtesy of Ryukyu mitsubishi-motors Corporation

Minicab MiEV (Electric Vehicle)

EV with spacious luggage space.

Courtesy of Ryukyu mitsubishi-motors Corporation

Increasing Charging Points



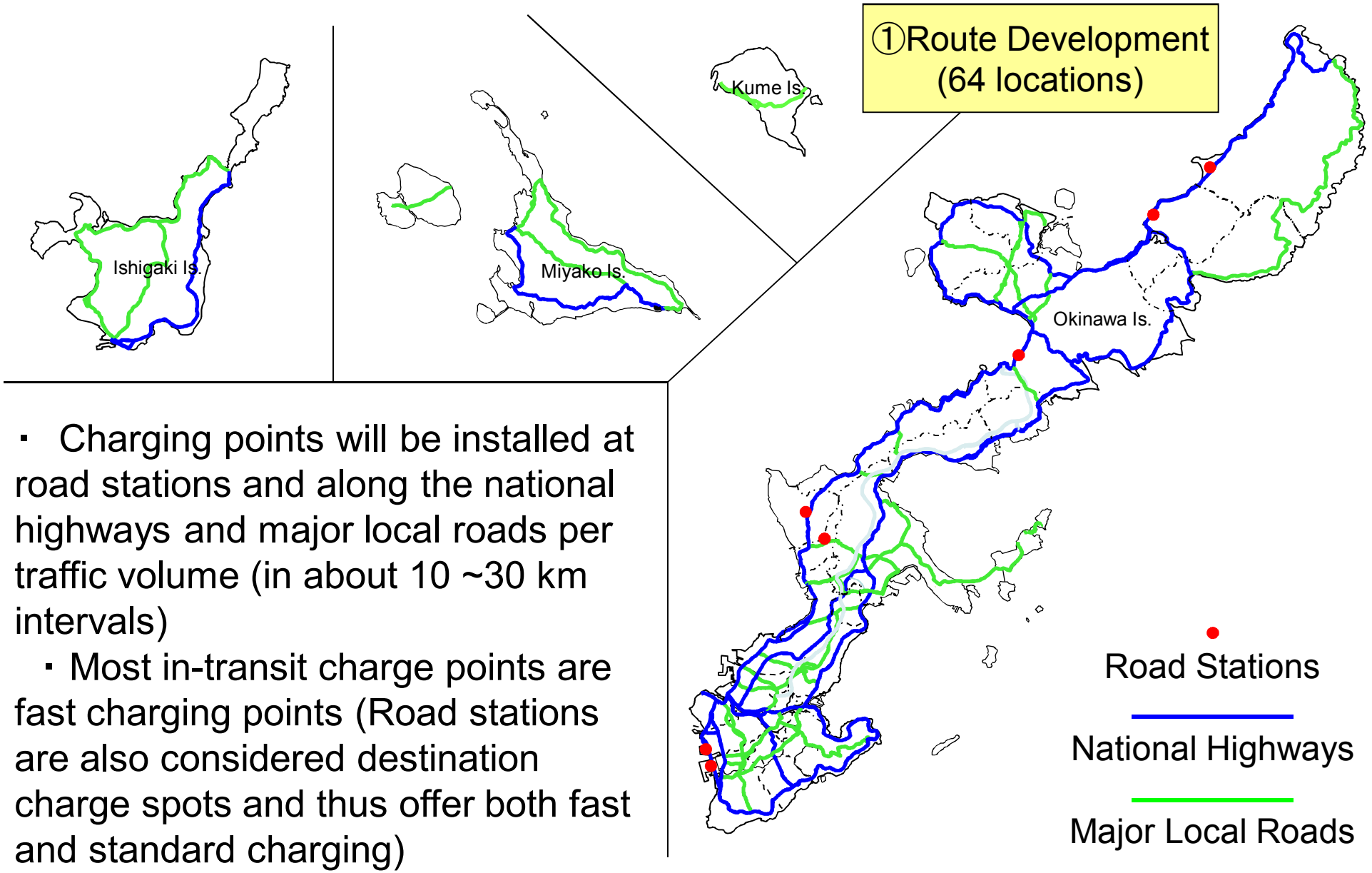
In Okinawa Prefecture, there are 102 rechargeable locations, 90 standard charging points and 37 fast charging points (as of end of March 2013)

Use of EV in Tourist Facilities (Okinawa Peace Prayer Park)

Subsidizing the Introduction of EV Rental Cars

Inaugural ceremony on February 1, 2015

Vision Map (1) Route Development-1



- Charging points will be installed at road stations and along the national highways and major local roads per traffic volume (in about 10 ~30 km intervals)
- Most in-transit charge points are fast charging points (Road stations are also considered destination charge spots and thus offer both fast and standard charging)

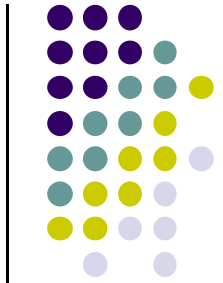
Vision Map (2) Regional Development

Municipality	Number of Charging Points
Naha City	5
Ginowan City	4
Ishigaki City	12
Urasoe City	4
Nago City	6
Itoman City	4
Okinawa City	4
Tomigusuku City	3
Uruma City	5
Miyakojima City	6
Nanjo City	10
Kunigami Village	4
Ogimi Village	3
Higashi Village	3
Nakijin Village	3
Motobu Town	4
Onna Village	4
Ginoza Village	3
Kin Town	3
Ie Village	3
Yomitan Village	4

Municipality	Number of Charging Points
Kadena Town	3
Chatan Town	3
Kitanakagusuku Village	3
Nakagusuku Village	4
Nishihara Town	3
Yonabaru Town	3
Haebaru Town	3
Tokashiki Village	3
Zamami Village	3
Aguni Village	3
Tonaki Village	3
Minami Daito Village	3
Kita Daito Village	3
Iheya Village	3
Izena Village	3
Kumejima Town	4
Yaese Town	3
Tarama Town	3
Taketomi Town	7
Yonaguni Town	3
Total	163

②Regional Development
(163 spots)

- Charging points will be installed per METI's Charging Point Infrastructure Development Model Plan based on the area, population and number of businesses of each municipality (installed as requested by each municipality, even if the request exceeds standard calculations)
- Standard and fast charging points will be installed to meet the needs of destination charging points and emergency charging points



Thank you.