

ELECTRIC VEHICLES USE IN VIETNAM

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Outline

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- ③ EVs use in Vietnam
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- ⑤ Conclusion – Q&A



Introduction

Vietnam

Population 93 million (ranks 14th)

Urban population 33%

Registered vehicles (2014)

43M motorcycles

2.2M cars

Exceeded the planning of government
by year 2020

Traffic issues

Congestions 6 AM – 9 PM

Air pollution from gasoline engines

Noise pollution

Traffic safety issues

Stress

Vehicles statistics by Vietnam National Traffic Safety Committee



Objective



E-bikes,
e-motorbikes



E-standing



E-car tour service



private e-car

Lack of information



Preliminary research

- Overview of EVs use in Vietnam
- Regulation and policy
- Challenging issues
- Discussions to encourage EVs



Two-wheeler specifications

National technical standardized regulations (Government, MOT)

	E-bike	E-motorbike
	With pedal	No pedal
Speed	< 25 km/h	< 50 km/h
Weight with battery	< 40 kg	< 118 kg
Motor power	0.25 kW	< 4 kW



Two-wheeler users

Data and survey collection

Users

Pupil, students, elderly, some middle aged people
for travelling city distances

Reasons

- Convenient, small parking space
- Low travel cost (compared to gasoline engines)
- Quiet operation
- Reduces CO2 emission
- ✓ Suitable for students: does not require a driving license

Around 70% owned by teenagers and students 18 years of age and above

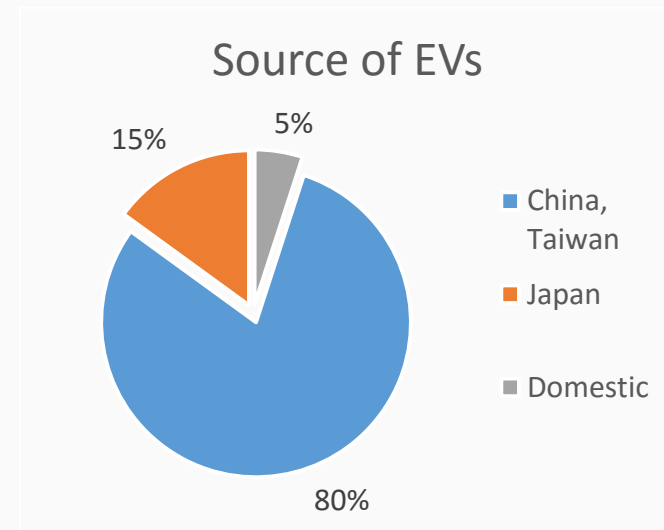
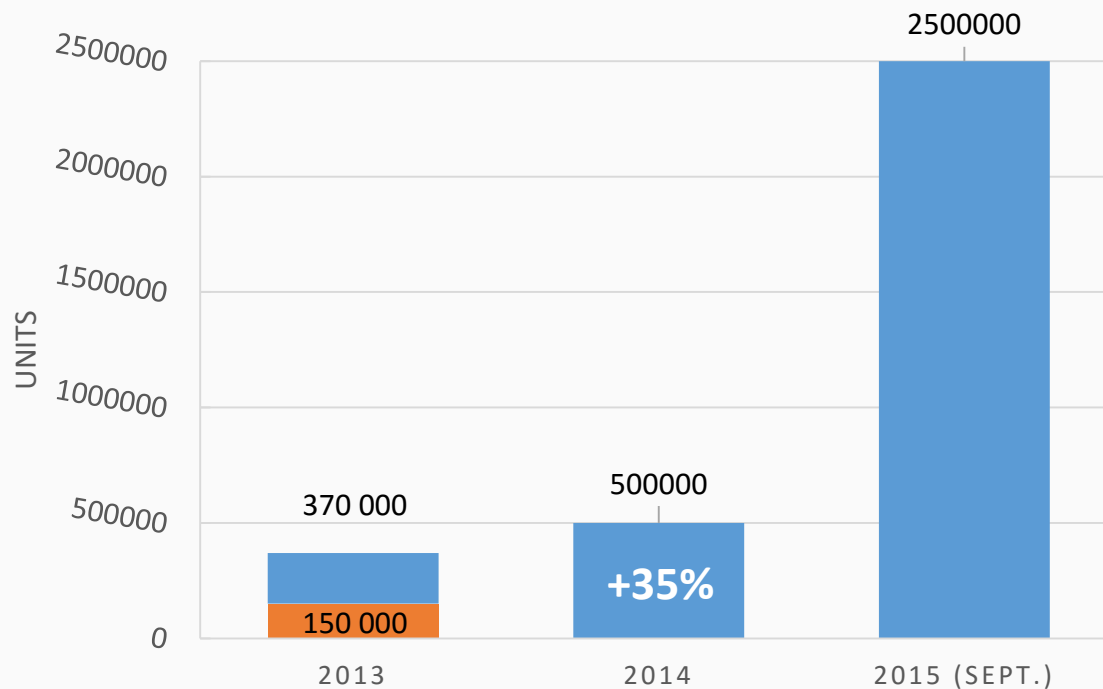


Two-wheeler market

E-bike and e-motorbike market growth

E-bikes sales in 2013: 150,000 units (~14% sales of motorcycles)

SALES OF ELECTRIC 2-WHEELERS



EVs use: e-cars

Private e-cars: 3-4 wheelers

Statistics by MOT, November 2014
Northern and central Vietnam

- Hanoi (50 units), Ha Long
- Da Nang, Hue

} 621 units

E-cars for tourism

Imported from Japan, China, Taiwan (no tax)

2010 - Hanoi

2015 - Ho Chi Minh city, Ha Long, Hai Phong

... and other cities/provinces

5 – 12 passengers, speed < 25 km/h

By November 2015: over 1086 units serving personal use and tourism



EVs use: projects



BK- Ebike project (5 years 2013 – 2018)

"Promotion of electric two-wheelers and solar energy in Vietnamese Cities: an explorative project Initiated and Tested in Hanoi"

By Caritas Switzerland in Vietnam and BK-Holdings from HUST

- i. to provide an e-bike service center for students with green energy, clean traffic
- ii. to promote the use of RE, reduce CO2 emission, and improve knowledge of RE, solution of clean transport; and to protect environment
- iii. to build sustainable society business model.

NAMAs

"Production and application of hybrid and electric cars in Vietnam"

Target by Government: **6M** eco-friendly vehicles in operation **by 2020**

- Phase 1 (2013-2016): Application of hybrid cars, this phase dedicates a pilot application for 15,000-20,000 Mai Linh taxi cars
- Phase 2 (2016-2020): Application of electric cars

2016	2017	2018	2019	by 2020
10,000 e-cars	+20,000	+20,000	+20,000	+30,000

NAMAs – Nationally Appropriate Mitigation Actions

Challenging issues

The government plays a key role for EV adoption in Vietnam

Key policy challenges

- Infrastructure
 - No public charging station, no dedicated parking, lack of separate lanes for EVs, battery technology
- Taxes
 - For e-bike and e-motorbike, not clear if they are subject to registration tax and road tax.
 - Tax levels competitive enough compared to motorbike and car?
- Driving license, quality control
 - What type of license for e-motorbike and e-car?
 - MOT have raised the fact that EVs currently do not come under any control.

Supportive research and innovation

In 2012 the government showed interest in promoting EV in the national policy
Public transportation has more concern than private vehicles



Conclusion - Q&A

1. In recent years, electric bikes and electric motorbikes have become increasingly popular in Vietnam.
2. They may have potential to effectively replace motorcycles, considering their advantages.
3. Many barriers remain, slowing down EVs adoption: tax policies, quality control, limited data, lack of infrastructure and technical awareness of consumers
4. The supportive policies for EVs industry, innovative research are important to promote the development of EVs in Vietnam.
 - Investigating environment impact of EVs, understanding EV consumers and producers and factors influencing buyers' choice.
 - It is necessary to evaluate the impact of EVs on electric distribution grid
 - Service solutions, e.g charge station map



THANK YOU FOR YOUR INTEREST!

Clean Energy and Sustainable Development laboratory
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