







## **Beijing New Energy Vehicle Development Status**

Nov. 2014





## **Outline**





National and Beijing's NEV policy incentives

NEV promotion and application in Beijing

Next steps

**Summary and observations** 

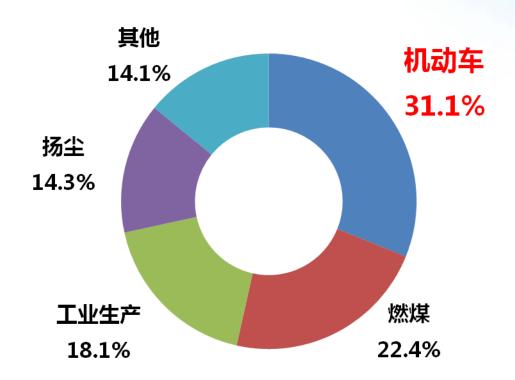


# **Severe** environment landscape

Given ever-increasing GHG emission and worsening environment pollution and energy issues, promoting NEV appears extremely important.



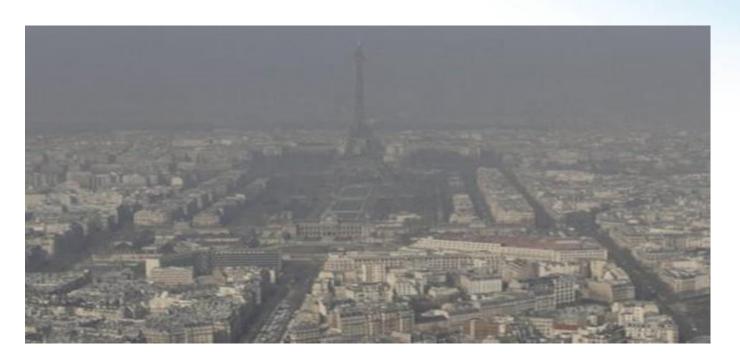
## **Severe** environment landscape (Beijing)



According to the data of the Beijing Environmental Protection Bureau, emission from vehicle fuel accounts for 31.1% of total PM2.5 emission in Beijing.



# **Severe** environment landscape (Paris)



In March 2014, the French Prime Minister's Residence issued an announcement that from March 17, Paris and 22 towns in the surrounding area will implement vehicle odd-and-even license plate rule to alleviate severe haze in Paris area.



➤ Defined by low pollution and low emission, NEV is the strategic technical route to address urban air pollution.

➤ NEV provides an important opportunity for the upgrading and sustainable development of the auto industry.

#### 2. NEV development status within and without China



#### □ Overseas NEV development landscape

- > National governments have put in place plans and policies for NEV industrial development:
- 1. Identify industrial objective, strategic intent and technological development roadmap;
- 2. Governmental organizations, together with industrial community and R&D institutes, increase capital input and strive to make more technological breakthroughs;
- 3. Support demonstrative operation and infrastructure construction;
- 4. Develop various financial and fiscal policies beneficial to NEV promotion, such as vehicle purchase subsidy, and tax breaks, etc.

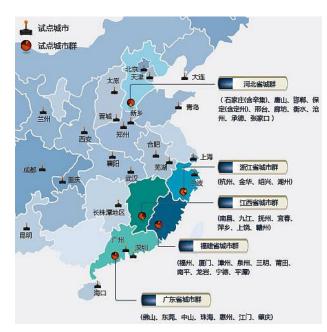
Sabsiay	亚洲			欧美			
1:2020年 2:2015年	*:	日本	<b>※</b> 第国	美国	德国	英国	法国
政策目标	50万辆 <sup>2</sup>	200万辆 <sup>1</sup>	120万辆 <sup>2</sup>	100万辆2	100万辆 <sup>1</sup>	24万辆 <sup>2</sup>	200万辆 <sup>1</sup>
组织部门	工信部、发 改委等	经济产业省	知识经济部等	能源部	经济部、交 通部等	气候变化 委员会等	电动汽车部际 协调委员会
运行计划	十城千辆 推广应用城 市计划等	EV/PHEV城 市计划		The EV Project	F&E- Programme	Plugged-in Places	The SAVE Project
国家投入	1000亿人民 币(2020)	2011年282亿日 元(逐年预算)	3.1万亿韩 元	24亿美元	累计已投入 5亿欧元	3亿英镑	650万欧元
示范范围	25个城市	18个城市		6州共18个城 市	8个示范区	8个地区	伊夫林省及 周边城市
国家平台		NEDO		JCESR	NPE		
基础设施	无明确数量 规划	200万处普通 充电设施, 5000座换电 站	2万个充电 机 <sup>2</sup>	33城4亿美元	"充电站网 络建设"	"Joined- Cities"协 助建设	>3000平米 集中式充换 电站
发展特色	"三横三纵"	"中性"技术路线	EV/FCV	PHEV	PHEV/EV	低碳	电动车分时 租赁

#### 2. NEV development status within and without China



#### **□ Domestic NEV development landscape**

- ➤ China released a notice on continuously promoting and using NEV in 2013. Altogether 88 cities are covered by this scheme and it's expected to promote 330,000 units by 2015.
- > The policy for exempting the NEV purchase tax was put into effect on Sept. 1, 2014, making consumers enthusiastic for purchase.







2<sup>nd</sup> batch: 12 cities or metropolis areas

#### 2. NEV development status within and without China



#### ■ Domestic NEV development landscape

- > A batch of distinctive cities have sprung up in China, including Beijing, Shenzhen, Hefei and Shanghai.
- Shenzhen: takes new energy bus as the major breakthrough to enlarge the demonstration scale of NEVs. By the end of 2013, Shenzhen had had more than 3,000 new energy buses; it formulated the charging service fee standard at the trial price of 0.45 yuan/kwh in 2014. It now has more than 800 electric taxis.
- Hefei: works to promote EVs in the private sector and has sold over 4,500 private electric cars; in 2014, Hefei released relevant policies for the service charge of electric vehicles' charging facilities, and put in place charging service fee standard of electric vehicles at a maximum of 1.70 yuan/kwh.
- Shanghai: explores into the R&D and application of fuel-cell vehicles, and rolls out the preferential policy that NEV could gain free license plate.







Shenzhen's new energy buses

**JAC iEV BEVs** 

Shanghai's fuel-cell vehicles





## > Issuance and implementation

Notice on Continuously Promoting NEVs dated Sept. 13, 2013 of four ministries and commissions

Implementation Plan for the Purchase of NEVs by Governmental Agencies and Public Institutes dated June 11, 2014 of the National Government Offices Administration

Guidance for Accelerating the Promotion of NEVs dated July 14, 2014 of the General Office of the State Council Notice on Issues Concerning Electricity Price Policy of Electric Vehicles dated July 22, 2014 of the National Development and Reform Commission

Announcement on Exempting the Purchase Tax of NEVs dated August 1, 2014 of the Ministry of Finance

Catalogue of NEVs Exempted from Purchase Tax (1st batch) dated August 29

Catalogue of NEVs Exempted from Purchase Tax (2<sup>nd</sup> batch) dated October 29

231 types of NEVs are covered by the two batches.

Among others, the first batch covers 17 BEVs and 6 PHEVs;

The second batch includes 28 BEVs and no PHEVs.

Plan for the Promotion of NEVs in Public Service Sectors in Beijing-Tianjin-Hebei Region, including Public Transit Sector, dated September 24, 2014 of 7 ministries and commissions, including the National Development and Reform Commission





#### Public sector

Put into effect the *Interim Measures of Beijing for the Municipal Subsidy for Promoting BEVs* 

Issue and implement the *Action Plan of Beijing for Promoting EVs (2014-2017)* on June 16

#### Private sector

Regulations and detailed rules: *Regulations of Beijing on Pilot Application of New Energy Passenger Cars* 

Detailed Rules of Beijing on the Management of Financial Subsidy for Pilot Application of New Energy Passenger Cars

Detailed Rules of Beijing on the Construction and Management of Private Charging Facilities of Pilot New Energy Passenger Cars

Installation of charging facilities: *Notice on Promoting the Installation of Private Charging Facilities* in Property Management Area

Key policy points: indicator management: independently allocated NEV indicator

Financial subsidy: 1:1 local financial subsidy based on national standard

Infrastructure: to be provided by vehicle enterprise which will be responsible for the installation.







- Establish the NEV joint conference system: established in 2009, the NEV joint conference system, with the competence leader of the municipal party committee and municipal government as the convener, 14 commissions, offices and bureaus as its members, is responsible for plan development, policy and capital coordination, coordination of key matters, and other tasks;
- 2. Joint conference office: is set up within the Beijing Municipal Science & Technology Commission and is responsible for organizing, coordinating, reporting work progress in a timely way, and submitting key matters to be addressed by the joint conference;
- 3. Members including: Municipal Development& Reform Commission, Municipal Science & Technology Commission, Municipal Economic & Information Commission, Municipal Financial Bureau, Municipal Environmental Protection Bureau, Municipal City Planning Commission, etc.

#### (2) Set up the EV application guarantee system



#### > EV operation service guarantee system

- Access scope: vehicles used in public transit, taxi, environmental sanitation, logistics and other public fields on a trial basis are fully integrated into the operation service guarantee platform;
- Monitoring information: monitor the voltage, current, temperature and other safe operation information of power battery of vehicles on a real-time basis around the clock;
- Platform function: ensure safe operation of vehicles through fault early warning; guide improvement in control strategy via big data analysis





#### (3) Plan and coordinate infrastructure construction



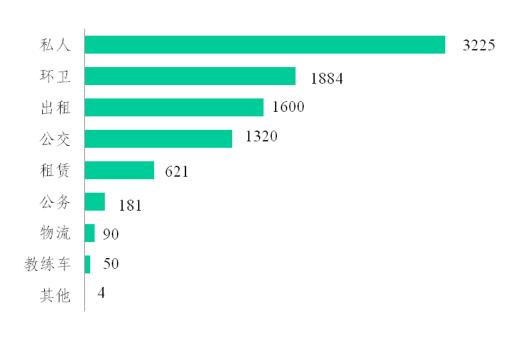
- Overall conditions: completed 5 large and medium-sized charging facilities in Gao' antun, Hangtianqiao and Sihui, as well as 98 charging points
- Construction of private charging points: completed 1,195 charging points for private use, 366 public charging points, including 160 quick charge points, 206 trickle charge points, with 572 charge interfaces
- 3. Relevant policies: the Beijing Municipal Commission of Development and Reform provides 30% of financial subsidy for charging infrastructure construction and speeds up the examination and approval process





Altogether 8,975 NEVs are used in public transit, logistics, environmental sanitation, regional lease, time-based lease, driving school, public and private (groups) and other sectors.

#### Number of NEVs in various sectors in Beijing (2009-2014) (unit)





#### (4) Innovate the pilot operational mode of EVs



#### > Electric taxi:

1,600 vehicles have been promoted in 9 suburban counties, with a daily mileage per vehicle of about 200km; as of the end of 2013, the cumulative mileage had reached 37.78 million km, carrying 4.6 million person trips.

#### > Electric coach car:

In early-2014, Beijing Oriental Fashion Automobile School launched 50 pilot electric coach cars.

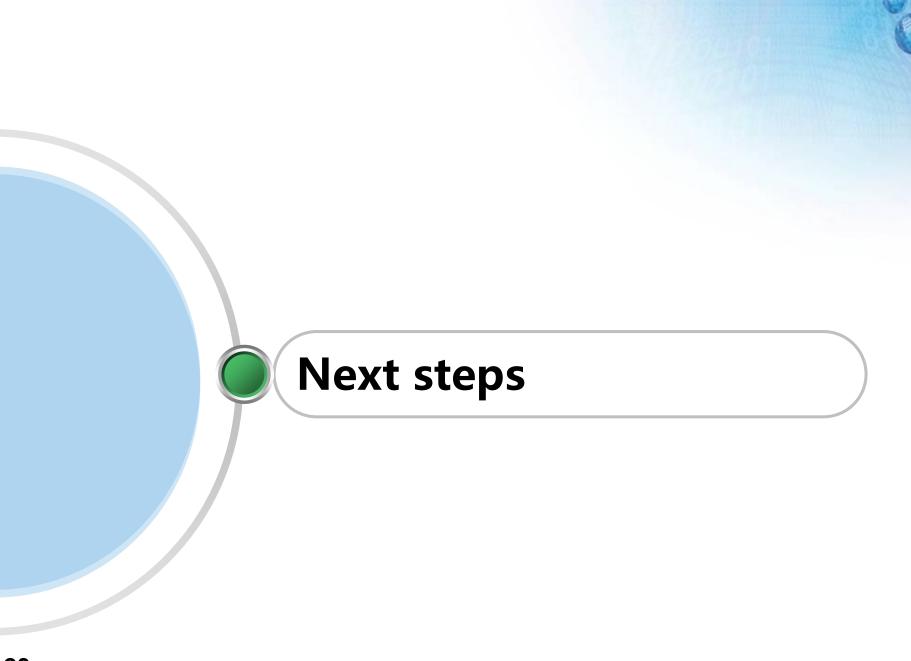
#### (4) Innovate the pilot operational mode of EVs



#### Electric rental car

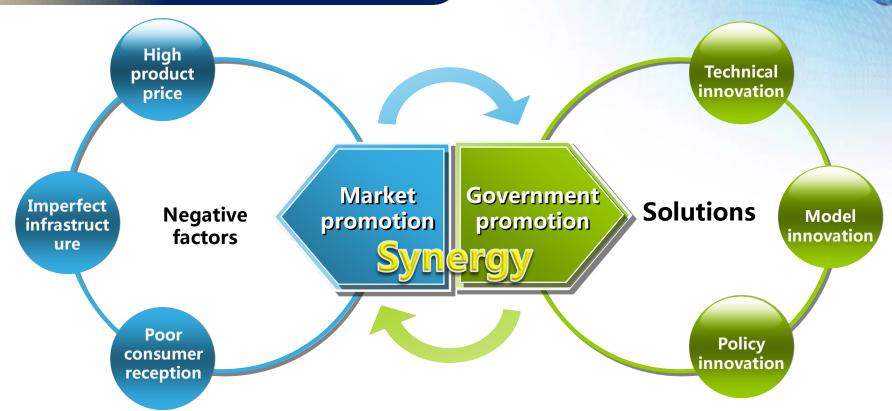
Since the time-based electric rental car pilot was launched in Ts inghua Science Park on May 20, 2013, the rental rate from Monday to Thursday has surpassed 90%; and the figure has reached 100% from Friday to Sunday.

For now, over 600 vehicles are made available for lease at scien ce parks, and universities.



## 4. Next steps





**Evident demonstration effect** 

**Obvious emission reduction effect** 

Mature application mode

High cost performance





### Promote electric buses

Beijing is now home to about 21,000 buses, each contributing about 65 tons of CO2 every year, which is 18 times of that of private cars.

- Electrification of trunk lines of buses, such as the line along Chang' an Avenue and BRT line
- Electrification of lines of microcirculation of rail connection
- Electrification of new towns in suburb, such as Huairou and Yizhuang











#### Accelerate utilization in taxi sector

The annual travel distance of taxis in the region reaches about 60,000 km. Each contributes about 10.8 tons of CO2 each year, which is more than 3-times of that of private cars.

Beijing now has about 60,000 taxis.

- All taxis used in 10 suburban counties are BEVs
- Newly-added taxis in the downtown area are BEVs



#### (1) Promote EV application in public sector



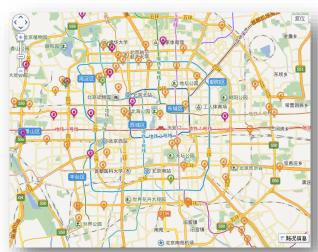
#### > Actively develop time-based lease

Feature: on-demand

Time-based lease will maximum the sharing of vehicle resources and give full play to the advantage of BEVs in zero emission and zero pollution

- Newly-increased rental cars initially select BEVs
- Establish time-based lease network of BEVs, mainly covering traffic hubs, business districts, large residential communities, universities (institutes) and science parks.







- Promote electrification of terminal logistics
  - Focus on logistics, especially promote the electrification of EMS and e-commerce terminal logistics









#### (1) Promote EV application in public sector

# > Pilot use of government cars

- Confidential communication service cars will use
   BEVs
- Launch pilots in areas relatively concentrated with governmental agencies
- Promote BEVs along with reform in service cars

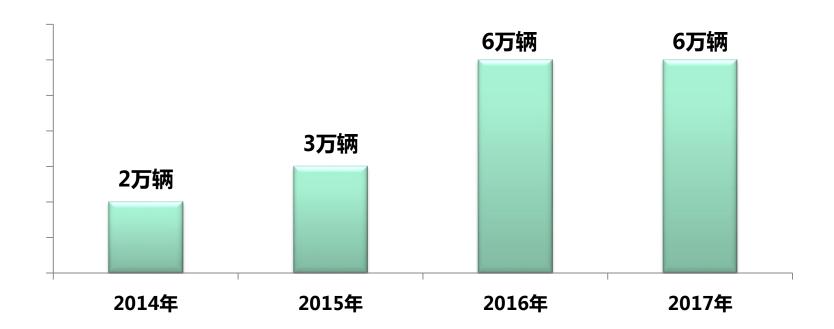




# (2) Allocate incremental index, guide inventory renewal and promote personal purchase

- Encourage to buy EVs
  - Allocate incremental index independently

2014-2017: 170,000 NEVs



# (2) Allocate incremental index, guide inventory renewal and promote personal purchase

## Encourage to buy EVs

## Actively guide inventory renewal

Efforts are made to work out relevant policies with a view to encourage the replacement of outmoded vehicles by NEVs







- Construct public charging service network
  - Construction of 1,000 quick charge points will be completed in 2014, making available a quick charge service network within a 5km radius on average within the Fifth Ring road.
  - By 2017, 10,000 quick charge piles will be completed mainly in public parking spaces, P+R parking spaces, large shopping malls and supermarkets, expressway service areas, 4S stores, gas stations and other places.
  - Construct the integrated charging service network in Beijing-Tianjin-Hebei region.





# > Establish integrated smart charging management platform

• Real-time release of information about charging and parking spaces

Smart navigation

Charging reservation

Remote inquiry and control of charging information





**Mobile APP** 



## **Summary and observations**

#### **5. Summary and observations**



- > The development of China's NEVs has shifted to the industrial development and introductions stage from the experimental stage
  - Review the technical maturity and market size of NEVs in a scientific way, innovate business mode and explore into segmentation
  - Reasonably match user popularization and infrastructure planning, design a win-win interest system for multiple stakeholders, construct infrastructure properly in advance
  - Strictly control industrial quality, gradually expand the industrial scale, narrow the price gap between NEVs and ICEVs

#### **5. Summary and observations**



- Balance the relationship between the leading role of market and policy incentives of the government
  - The government needs to put in place appropriate incentive policies, harness the synergy of policies and the society, so as to mobilize the internal power of enterprises and the entire market
  - Incentive policies of the government shall be proper, so as to keep the stability of the policy and at the same time avoid overreliance of enterprises on the policies.









# Thank You

