



City, Driver of Green Economy Beijing Story

LI XIAOHUA

Deputy Director General, Beijing EPB

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- ◆ **A city with 3000 years history and 800 years as capital**
- ◆ **Fast social and economic development in the past over 30 years:**

- **Area: 16,400 km²;**
- **Population: 21.70 million;**
- **Total GDP per capita: 2 trillion RMB Yuan;**
- **Automobiles: 5.6 million;**
- **Energy consumption: 73 million tons of standard coal;**

The rapid growth of economy and society has brought huge pressure on environment, sustainable development has been taken as development strategy.



- ◆ GDP reached 2 trillion RMB Yuan at annual growth rate 7.5%;
- ◆ Total retail sales of consumer goods: from 643 billion to 1 trillion RMB Yuan;
- ◆ Building over 1 million government subsidized apartments;
- ◆ Created new jobs: 2.17 million
- ◆ Building and retrofitting 200 schools and 843 kindergartens



- ◆ 17 million ton coal consumption replaced by natural gas and other clean fuels
- ◆ 1.8 million old polluting cars scrapped;
- ◆ 158 urban parks and 11 countryside forest parks;
- ◆ metro length extended from 218 km to 554km (336 km new);
- ◆ built 41 new wastewater treatment plants (total capacity 2.74 million t/d), 2768 km new sewers;



CASE1 : Clean Fuel Campaign: 2000 sets of coal boilers (20,000 t/h capacity in total) converted from coal to gas, 123,000 households changed heating from small coal stoves to electricity;

◆ **Environmental and health benefits : greatly reduced air pollution during heating season;**

◆ **Economic benefit: Prosperous market for gas boilers created, great opportunity for gas boiler suppliers; Elco, Rellio and other Italian and European brand low NOx emission boiler find good market share**



CASE2: Green Transportation: 18 metro lines (554 km), 20,000 buses, 50,000 public bikes, public transportation taking 50% of urban trips

◆ **Environmental and health benefits : reducing air pollution from transportation;**

◆ **Social benefit: public transportation taking 50% of passenger trips;**

Beijing Metro Map

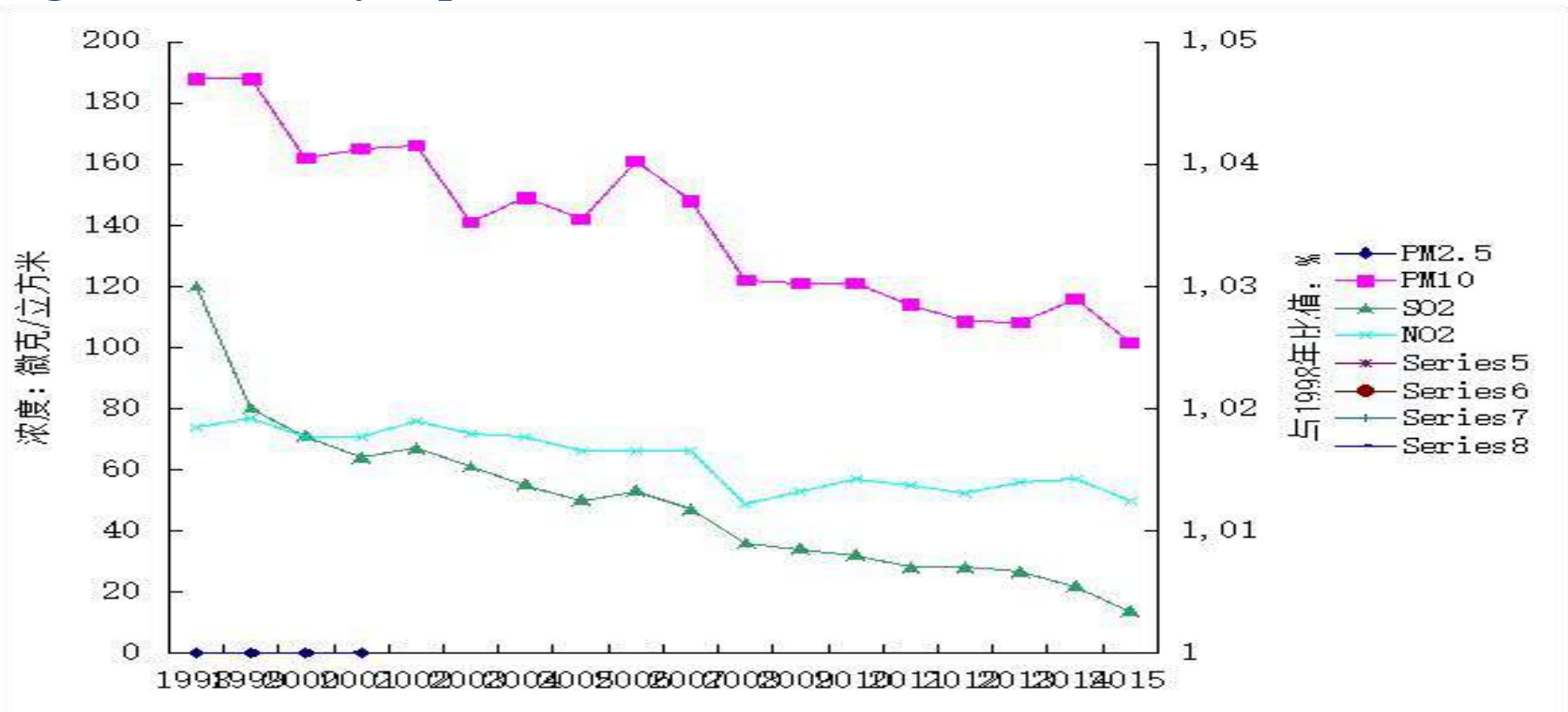


CASE3: Beijing Olympic Green-the biggest urban park, 680 hectares, 75% green coverage:

- ◆ **Environmental benefits on air, water and retaining CO₂;**
- ◆ **Health benefit: 12 million visitors per year, 70% regular visit;**
- ◆ **Economic benefit:**
 - ◆ **public willingness for payment: 153 million Yuan/year**
 - ◆ **Over 3300 jobs created;**
 - ◆ **Surrounding real estate value 30% higher than similar location**



Air quality keeps improving in the past over 15 years, wastewater treatment in urban and rural area increased to 87%, urban solid waste collection and disposal rate almost reached 100% along with the economic growth and city expansion .



Green Development Strategy highlighted :

- ◆ **Global:** 2030 agenda for sustainable development
- ◆ **National:** 5 Development Concepts: Innovation, Coordination, Green Development, Opening Up, and Sharing; **Clean River and Green Mountain are Gold and Silver;**
- ◆ **Jing-Jin-Ji Regional Development:** Transportation, Environment, and Economy, the 3 priorities for balanced development in a region of 210,000 km², and 108million population;
- ◆ **Beijing:** Politic Center, Culture Center, International Exchange Center, Innovation Center; World Class Livable Capital City.

◆ **Challenge:**

◆ **Metropolitan problem: high population, overlapped functions, traffic jam, environmental pollution;**

◆ **Opportunity:**

◆ **Political determination from top;**

◆ **Strong public appeal for better environmental quality and green development**

Transformation from traditional economy to green economy is Beijing's choice after over 30 years rapid development

Key events

- ◆ The new sub-city center
- ◆ 2019 Horticulture Exhibition
- ◆ 2022 Winter Olympic Games
- ◆ The Universal Studio
- ◆ The new airport;



Outline for Beijing Economic and Social Development Planning 2016-2020 and over 10 sub-plans are published, key indicators :

- ◆ **Population: not exceeds 23 million**
- ◆ **annual GDP growth rate 6.5%;**
- ◆ **Scrap 520,000 polluting cars;**
- ◆ **build 20 new countryside forest parks;**
- ◆ **Build 346 km metro to a total of 900 km;**
- ◆ **building new domestic waste collection and disposal capacity to reach 30,000 t/d;**
- ◆ **Build or retrofit 44 new wastewater treatment plants,4 sludge treatment plants, (total capacity 6,400 t/d), 1347 km new sewers, wastewater treatment facilities for 118 villages;**

Case 1: Capital Steel Group Closed site (8.60 km² area) redevelopment :

Step 1: overall soil pollution assessment

Step 2: Master plan for redevelopment, aiming modern city function: industrial heritage park, office area , new financial zone, and animation industry park;

Step 3: cleaning the site cell by cell according to the planned function

Step 4: Develop the site into a new city center with integrated function



Case 2: Sinopec Yanshan Cooperation, located 30 km away from the city center, supply qualified gasoline for Beijing city and fuel for the airport, will maintain refinery capacity at 10 million ton/year . A key air pollution source, the target for control VOC.

Demands: technology for reducing fugitive VOC emission, control and prevention of pollution on groundwater and soil, assessment of emission control effect.....



Italy has had long and fruitful environmental cooperation with China and Beijing, there is great potential for cooperation on green economy:

- ◆ Big data environmental related service: monitoring and assessment for ambient air, water, and soil, noise, radiation and pollution sources;**
- ◆ Stringent local laws and environmental standards will drive for innovative technology, product, and service for pollution control: low or zero emission automobile, boiler, advanced wastewater treatment, brownfield clean;**
- ◆ Smart city service on transportation, logistic support;**
- ◆ cleaner production technology and process: prefabricated construction, car manufacture, petro-chemical production etc ;**

THANKS FOR YOUR ATTENTION

