



International Partnership
for Hydrogen and Fuel Cells
in the Economy

China Update

37th IPHE Steering Committee Meeting
26 – 27 April 2022
Virtual Meeting

Mid- and Long-Term Plan for the Development of Hydrogen Energy Industry (2021-2035) *China*



National Development and Reform Commission

National Energy Administration



1. Strategic Position

Hydrogen energy

- Important part of the future national energy system
- important carrier for energy-using terminals to achieve green and low-carbon transformation

Hydrogen energy industry

- Strategic emerging industry and key development direction of the future industry



Mid- and Long-Term Plan for the Development of Hydrogen Energy Industry (2021-2035) *China*



2. Overall requirements

(1) Basic principles

- Innovation leads, self-reliance and self-improvement
- Safety first, clean and low-carbon
- Market-oriented, government-led
- Apply prudently and demonstrate first

(2) Development goal (2025)

- 50,000 Fuel cell vehicles & a number of hydrogen refuelling stations
- Hydrogen production from renewable energy: 100,000 - 200,000 tons/year
- Carbon dioxide emission reduction: 1-2 million tons/year



Mid- and Long-Term Plan for the Development of Hydrogen Energy Industry (2021-2035)



3. Key tasks

(1) Build an innovation system to support the high-quality development of the hydrogen energy industry

- Improve the level of key & core technologies
- Build an industrial innovation support platform
- Promote the construction of hydrogen energy professionals
- Encourage international cooperation in hydrogen energy technology innovation



Mid- and Long-Term Plan for the Development of Hydrogen Energy Industry (2021-2035) *China*



(2) Coordinate and promote the construction of hydrogen energy infrastructure

- Rational layout of hydrogen production facilities
- Steady construction of storage and transportation system
- Overall planning of hydrogen refueling network

(3) Promote the diversified demonstration application of hydrogen energy

- Promote demonstration applications in the transportation field
- Carry out demonstration applications in the energy storage field
- Layout of multiple applications in the power generation field
- Exploration of alternative applications in the industrial sector



Mid- and Long-Term Plan for the Development of Hydrogen Energy Industry (2021-2035) *China*



(4) Improve hydrogen energy development policies and institutional guarantee systems

- Establish and improve the hydrogen energy policy system
- Establish and improve the hydrogen energy industry standard system
- Strengthen the whole chain safety supervision



Documents – Energy *China*



Time	Department	Document
22-Mar-22	National Development and Reform Commission National Energy Administration	14th Five-Year Plan for Modern Energy System
29-Jan-22		14th Five-Year New Energy Storage Development Implementation Plan
10-Feb-22		Opinions on Improving the Institutional Mechanism and Policy Measures for Energy Green and Low-Carbon Transformation



Documents – Transportation *China*

Time	Department	Document
18-Mar-22	Ministry of Industry and Information Technology	Key Points of Automotive Standardization in 2022
14-Dec-21	National Railway Administration	14th Five-Year Plan for Railway Science and Technology Innovation
21-Jan-22	Ministry of Transport	14th Five-Year Development Plan for Green Transportation
2-Nov-21		14th Five-Year Development Plan for Integrated Transportation Services

Documents – Industry *China*

Time	Department	Document
28-Mar-22	Ministry of Industry and Information Technology	Guiding Opinions on Promoting the High-quality Development of the Petrochemical and Chemical Industry during the 14th Five-Year Plan
	National Development and Reform Commission	
	Ministry of Science and Technology	
	Ministry of Ecology and Environment	
	Ministry of Emergency Management	
	National Energy Administration	
31-Dec-21	Ministry of Industry and Information Technology	Smart Photovoltaic Industry Innovation and Development Action Plan (2021-2025)
	Ministry of Housing and Urban-Rural Development	
	Ministry of Transport	
	Ministry of Agriculture	
	National Energy Administration	
15-Nov-21	Ministry of Industry and Information Technology	14th Five-Year Plan for Industrial Green Development

Documents – R&D and Standard *China*

Time	Department	Document
3-Mar-22	Ministry of Science and Technology	14th Five-Year Implementation Plan for East-West Science and Technology Cooperation
	Ministry of Education	
	Ministry of Industry and Information Technology	
	Ministry of Natural Resources	
	Ministry of Ecology and Environment	
	State-owned Assets Supervision and Administration Commission of the State Council	
	Chinese Academy of Sciences	
	Chinese Academy of Engineering	
	China Association for Science and Technology	
17-Feb-22	Standardization Administration	Key points of national standardization work in 2022

Documents – Investment and Consumption *China*

Time	Department	Document
21-Jan-22	National Development and Reform Commission	Implementation Plan for Promoting Green Consumption
	Ministry of Industry and Information Technology	
	Ministry of Housing and Urban-Rural Development	
	Ministry of Commerce	
	State Administration for Market Regulation	
	National Government Offices Administration Directly Affiliated Agency Administration of the Communist Party of China	
30-Dec-21	State-owned Assets Supervision and Administration Commission of the State Council	Guiding Opinions on Promoting the High-quality Development of Central Enterprises and Doing a Good Job in Carbon Neutralization

Beijing Winter Olympics 2022

1. Duration

Feb. 4 ~ Feb. 20

2. Goal

A “green” Olympics

3. Hydrogen in Olympics

- All “green hydrogen”
- “Green hydrogen” as fuel for torch
- 1025 FCVs
- More than 30 HRSs



Type	Number	Application
Car	140	VIP
Minibus	105	Shuttle bus
Bus	780	Auxiliary bus



Fuel cell vehicle demonstration city clusters *China*

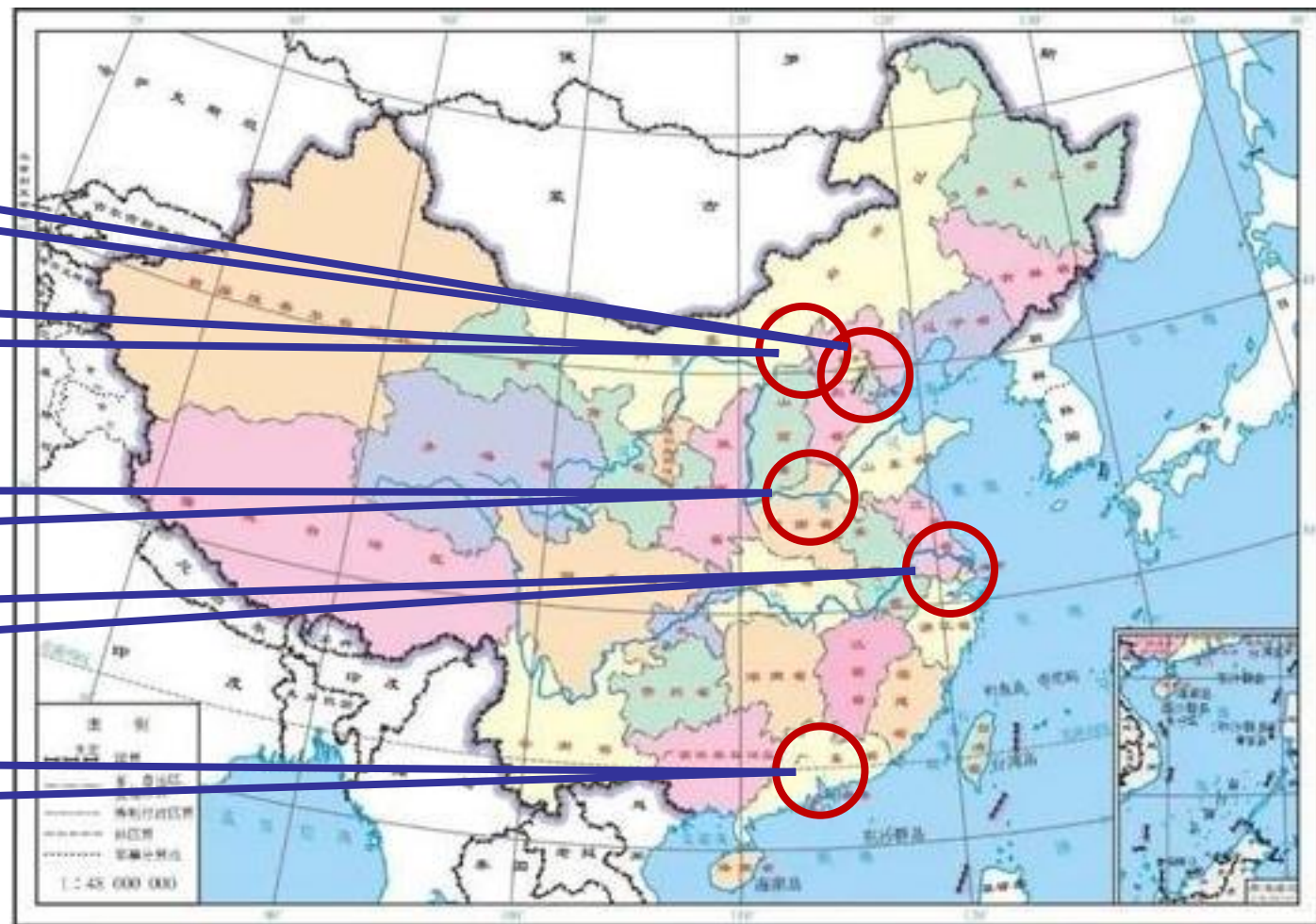
Beijing, Tianjin, Hebei,...

Hebei (Zhangjiakou),...

Henan (Zhengzhou),...

Shanghai,...

Guangdong (Foshan),...



Deployment and Subsidy *China*

Deployment

- Fuel cell vehicles: 9,237 (production) and 8,938 (sale) (~2021.12)
- Hydrogen refuelling stations: more than 250 (~2022.3)

Subsidy

Ministry of Industry and Information Technology

Subsidy funds for the promotion and application of new energy vehicles in 2019-2020

1,029 vehicles, subsidy amount of **438.24 million CNY** (≈ 68.37 million USD)



Thank you



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