

Overview of China Hydrogen Energy Policy



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For a long time, China has had no specific policies for hydrogen energy and the fuel cell industry. Most of the policy support is

Development of hydrogen energy policy in China

only a part of macro policies, such as to facilitate the development of new energy vehicle, and to carry out scientific and technological innovation in energy and transportation sectors. Authorities that issue these policies are mainly the National Development and Reform Commission (NDRC), Ministry of Science and Technology (MoST), Ministry of Finance (MoF) and Ministry of Industry and Information Technology (MIIT). They issue macro-level guiding policies for the development and application of fuel cell vehicles and the construction of hydrogen energy infrastructure, as well as financial support for R&D and direct subsidies. Among them, the subsidy policy promoting the development of fuel cell vehicles has proven to be the most direct and effective one. Since 2018, the attention and support for hydrogen energy and fuel cells have increased significantly, especially for some

of hydrogen energy technologies and fuel cells, improving the industrial chain and promoting the industrial demonstration and application, as well as the construction of hydrogen energy infrastructure such as hydrogen refueling station.

Major hydrogen energy and fuel cell policies

local governments. It is expected that in the future, China will focus on supporting the technical research of key components

Incentives		Development Strategy Specific Targets
Document	Ministry	Summary
Notice on Carrying Out Demonstration and Promotion Pilot Work of Energy Saving and New Energy Vehicles, MoF Construction [2009] No.6	MoF MoST	Carry out new energy vehicle demonstration pilot projects in 13 cities and provide one-off subsidies to new energy vehicles for urban public services. In which fuel cell passenger vehicles and light commercial vehicles providing public services receive RMB 250,000/car, and over 10m urban fuel cell buses receive RMB 600,000/car.
Development Plan of Energy Saving and New Energy Vehicle Industry (2012-2020), the State Council [2012] No.22	the State Council	Make fuel cell vehicles and vehicle applied hydrogen energy two of major objectives. Focus on R&D of core technologies such as fuel cell vehicle and carry out demonstration programs; improve the reliability and durability of fuel cell systems in order to drive the development of hydrogen production, storage, transportation and filling technology.
Notice on Continue to Promote the Application of New Energy Vehicles, MoF Construction [2013] No.551.	MoF, MoST, MIIT, and NDRC	In 2013, fuel cell passenger vehicles received a subsidy of RMB 200,000 per car and fuel cell commercial vehicles of RMB 500,000 per car.
Strategic Action Plan for Energy Sector Development (2014- 2020), the State Council [2014] No.31	the State Council	Hydrogen energy and fuel cells are officially categorized as the strategic developing direction of energy technological innovation.
Notice on Levying Purchase Tax on Battery Coatings, MoF Tax [2015] No.16	MoF STA	Exempt fuel cell from purchase tax.
Implementation Opinions on Accelerating the Promotion and Application of New Energy Vehicles in Transportation Industry, MoT Development [2015] No.34	МоТ	Actively promote the application of fuel cell vehicles is a fundamental principle, and implement supporting policies as one of the main tasks. Exempt fuel cell vehicles from vehicle purchase tax from 1 September 2014 to 31 December 2017.
Notice on Financial Policy for Promotion and Application of New Energy Vehicles (2016- 2020, MoF Construction [2015] No.134	MoF, MoST, MIIT, and NDRC	Since 2016, the subsidy for fuel cell vehicles is RMB 200,000/car for passenger fuel cell vehicles, RMB 300,000/car for light buses and freight cars, and RMB 500,000/car for large and medium-sized buses and medium heavy-load trucks.
Energy Technology Revolution and Innovation Action Plan (2016-2030), NDRC Energy [2016] No.513	NDRC and NEA	List hydrogen energy and fuel cell technology innovation as major tasks, and define the strategic direction, innovation objectives and action roadmap.
Made in China 2025 - Energy Equipment Implementation Plan, NDRC Energy [2016] No.1274	NDRC, MIIT and NEA	Clarify the direction of fuel cell technology research and development, pilot project demonstration, and application promotion.
Energy Saving and New Energy Vehicle Technology Roadmap	China SAE	Define every five-year development goals of main technical parameters of fuel cells from 2015 to 2030, including maximum efficiency, material cost, life span, power ratio, etc.
Medium and Long Term Development Plan of Automobile Industry, MIIT Equipment [2017] No.53	MIIT, NDRC and MoST	To establish innovation centre by 2020, formulating a fuel cell vehicle technological roadmap will be a major task. Strive to make technological breakthroughs covering the whole industry chain and gradually expand the pilot scope. To organize enterprises, universities and research institutes to solve bottlenecks together under the support of enterprise investment, social capital and government funds.
Notice on Adjusting and Improving the Subsidy Policy for the Promotion and Application of New Energy Vehicles, MoF Construction [2018] No.18	MoF, MoST, MIIT, and NDRC	Since June 2018, fuel cell passenger vehicles will receive a subsidy of RMB 6,000/kW based on the rated power of the fuel cell system, the upper subsidising limit is RMB 200,000/car. The subsidy for fuel cell light buses and freight cars is up to RMB 300,000/car, and for large and medium-sized buses and medium heavy-load trucks is up to RMB 500,000/car. The technical requirements are also formulated.
Action Plan of Diesel Truck Pollution Control, MEE Atmosphere [2018] No.18	MEE, NDRC, MIIT, MPS, MoF, MoT, MoC, SAMR, NEA, NRA and CRCC	Actively promote the application of new energy logistics vehicles, encourage local governments to introduce fuel cell truck demonstration business and build hydrogen refueling demonstrative stations.
Notice on Printing and Distributing the Green Industry Guidance Catalogue 2019, NDRC Environment Investment [2019] No.293	NDRC, MIIT, MNR, MEE, MoHURD, People's Bank of China and NEA	Fuel cell and hydrogen refueling equipment manufacturing, and construction and operation of hydrogen energy infrastructure and refueling stations are listed in the clean energy industry catalogue.
Government Work Report 2019	the State Council	Hydrogen energy has been written into the Government Work Report for the first time, the government aims to facilitate the development of EV charging and hydrogen refueling station infrastructures.
Guiding Catalogue of Industrial Structure Adjustment (2019 version), NDRC Order No.29	NDRC	The government encourages industries including high-efficient hydrogen production, transportation and high-density hydrogen storage, and covers technical research, application and equipment manufacture sections. Hydrogen refueling stations and manufacture of key components of hydrogen fuel cell vehicles are also involved.
White Paper on China's Hydrogen Energy and Fuel Cell Industry	China Hydrogen Alliance (not government offical document)	China's hydrogen demand is expected to account for 5% of total energy consumption by 2030 and nearly 10% by 2050. Currently, the majority of industrial chain enterprises are focusing on fuel cell manufacture and application, while storage, transportation and infrastructure sections lack attention.
Announcement on Continuing to Implement Preferential Policies of Vehicle Purchase Tax, MoF Tax [2019] No.75	MoF STA	New energy vehicles including fuel cell vehicles will be exempted from vehicle purchase tax by 31 December 2020.
Catalogue of Industries Encouraging Foreign Investment (version 2019), NDRC and MoC Order No.27	NDRC MoC	Foreign investments are welcome in fields of hydrogen fuel production, storage, transportation and liquefaction, as well as Ni-MH power battery and construction and operation of hydrogen refueling stations.
Outline of Building National Strength in Transportation	The Central Committee of the Communist Party of China and the State Council	Strengthen the construction of urban hydrogen refueling station infrastructures.
Notice to Facilitate the Establishment of Green Manufacture and Consumption Law and Regulation System, NDRC Environment [2020] No.379	NDRC MoJ	The government requires to complete the research and formulation of standards and supporting policies for hydrogen energy development by 2021.
Notice to Issue the China Energy Law (Request for Public Comments Version)	NEA	This is the first law to define hydrogen as energy at the national level.
Notice on Improving the Subsidy Policy for the Promotion of New Energy Vehicles, MoF Construction [2020] No.86	MoF, MoST, MIIT, and NDRC	The current purchasing subsidy of fuel cell vehicles will be replaced by other incentives (issued later), specific cities and regions that actively carry out demonstration of technical research and development and industrialization of fuel cell vehicles will be able to enjoy it. The government aims to establish the industrial chain of fuel cell and hydrogen-powered vehicles within four years.
Notice on Demonstration and Promotion of Fuel Cell Vehicles	MoE	Central government's financial support will change from subsidizing vehicles to rewarding demonstration cities, including support of upstream R&D, manufacturing and downstream vehicle purchase in demonstration cities, so as to encourage local

MIIT - Ministry of Industry and Information Technology MNR - Ministry of Natural Resource

NEA - National Energy Administration NRA - China National Regulatory Authority MEE - Ministry of Ecological Environment

Abbreviation of the authorities

China SAE - China Society of Automotive Engineers CRCC - China Railway Construction Corporation Limited

NDRC - National Development and Reform Commission

GAC - The General Administration of Customs

(draft for comment)

Promotion of Fuel Cell Vehicles

MoF

MoHURD - Ministry of Housing and Urban-Rural Development MoJ - Ministry of Justice MoST - Ministry of Science and Technology

SAE - Society of Automotive Engineers SAMR - The State Administration for Market Regulation

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STA - State Taxation Administration Reference

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market demand to carry out new hydrogen technology R&D and industrialization

AQSIQ - General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China

governments with good economic and industrial foundation, high enthusiasm and large

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MoT - Ministry of Transport MPS - The Ministry of Public Security of the People's Republic of China

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