



Country Update China (Spring 2017)

➤ Policy

- On October 26th 2016, "Technology Roadmap for Energy-Saving and New Energy Vehicles" was officially released by SAE China, including the Fuel Cell Vehicle Technology Roadmap.

		2020	2025	2030
Overall Target		Small-scale demonstration of FCVs in public transportation in particular area. 5,000 units scale	Large-scale application in public and private transportation. 50,000 units scale	Large-scale application of commercial and passenger fuel cell vehicles. Million units scale
		Fuel cell system production capacity greater than 1,000 sets per enterprise	Fuel cell system production capacity greater than 10,000 sets per enterprise	Fuel cell system production capacity greater than 100,000 sets per enterprise
Fuel Cell Vehicles	Performance requirements	Cold start -30°C, costs at the same level as pure electric vehicles	Cold start -40°C, costs at the same level as hybrid vehicles	Performance is same as traditional vehicle, have competitive advantage
	Commercial vehicle	Durability 400,000 km cost ≤ 1,500,000 yuan RMB	Durability 800,000 km cost ≤ 1,000,000 yuan RMB	Durability 1,000,000 km cost ≤ 600,000 yuan RMB
	Passenger vehicle	Lifetime 200,000 km cost ≤ 300,000 yuan RMB	Lifetime 250,000 km cost ≤ 200,000 yuan RMB	Lifetime 300,000 km cost ≤ 180,000 yuan RMB
Key components technologies		High speed oil free compressor, hydrogen circulation system, 70MPa hydrogen storage system satisfy the vehicle requirements		System cost lower than 200 yuan / kW
Hydrogen infrastructure	H2 production	Distributed renewable hydrogen production and by-product hydrogen with high efficient purification technology		Distributed renewable hydrogen production
	H2 transportation	High pressure compressed H2 storage and transportation	Low temperature liquid H2 storage and transportation	Organic liquid hydrogen storage and transportation
	Hydrogen refuelling station	≥ 100 stations	≥ 300 stations	≥ 1000 stations



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- On Dec 29th 2016, the central authorities renewed the standards of new energy vehicle subsidies for 2017. Except fuel cell vehicle, central and local subsidy standards and limits for various models in 2017 and 2018 fall 20% on the basis of existing standards. The revision also raises technological standards, including battery capacity and pure electric drive range.
- For fuel cell vehicles, the subsidy standards are defined as follows:

	Vehicle type	Pure electric drive Range R (km)	Fuel cell system power rating P (kW)	Subsidy standard (10k RMB)	Technical requirement
Fuel cell vehicle	Passenger vehicle	$R \geq 300$	$30 > P > 10$	0.6/kW, upper limit 20	Fuel cell system power rating is not less than 30% of the drive motor power rating
	Passenger vehicle	$R \geq 300$	$P \geq 30$	20/unit	
	Light bus, truck			30/unit	
	Large and medium-sized bus, medium and heavy duty truck			50/unit	



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➤ Demonstration and deployment

- January 2017, a 35MPa hydrogen refuelling station opened in Yunfu City in South China's Guangdong Province. This is the first hydrogen refuelling station in Guangdong Province, one of the most promising area for fuel cell vehicles in China. More than 10 HRSs are in planning or under construction in Guangdong Province.
- CRRC Qingdao Sifang announced on March 9, 2017 that it has signed a contract to produce eight hydrogen-powered trams. The trams are expected to run on a 17.4 km track with 20 stations in Foshan city, Guangdong Province. The first phase of the project officially started construction February 27th, and is expected to be completed by the end of 2018.

