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China Issues Methanol Vehicle Promotion Policy

Methanol Vehicle Policy Issued by Eight Chinese ministries led by China's Ministry of Industry and Information Technology (MIIT)

Yesterday, eight ministries of China's central government led by the powerful Ministry of Industry and Information Technology (MIIT), along with the National Development and Reform Commission (NDRC), Ministry of Science and Technology (MOST), Ministry of Public Security (MOPS), Ministry of Ecology and Environment (MEE, former Ministry of Environmental Protection), Ministry of Transportation (MOT), National Health Commission (NHC) and State Administration for Market Regulation (SAMR) issued a promotional policy paper – "Guidance of Developing Methanol Vehicles Applications in Some Parts of China" – to deploy methanol fueled vehicles across China.

The methanol policy paper follows a six-year pilot program conducted by MIIT involving over 1,000 vehicles in 10 cities from 5 provinces to test and verify the technical issues associated with cars, trucks and buses operating on neat methanol or M100. The pilot fleet accumulated nearly 200 million kilometers of total mileage with 24,000 tons of methanol consumed. The pilot program included tests of vehicle fuel economy and emissions, along with the health of people in the working environment.

The policy paper encourages the broad commercial expansion of methanol-fueled vehicles in China from the central government with the following key policies:

Encourage Development of Manufacturing Capabilities of Methanol Fueled Vehicles, including passenger cars, commercial heavy-duty vehicles, off-road vehicles and machinery. Key and dedicated components for fuel injection, after treatment, filters and lubricant oil, corrosion resistant components. New technologies like methanol-electric hybrid vehicles, methanol range extended electric vehicles, and methanol fuel cell vehicles.

Promote Development of Production and Fueling Systems of Methanol Fuel, including methanol production feedstocks of low-quality coal, coal-bedded methane, coking gas, and exploring the production of renewable methanol from CO2. Fuel methanol should comply with National Standard of "Fuel Methanol for Motor Vehicles (GB/T23510-2009)" to ensure quality. Planning the expansion of methanol fueling stations according to local conditions along with related standards and guidelines.

Accelerate Development of Standards System, including methanol vehicles, engines, dedicated lubricant oils, and standard methanol fuel. Encourage international standards formulation and improve standards on methanol fuel and fueling system, including design and construction of methanol fueling stations, methanol fuel safe operation and additives of methanol fuel.

Encourage Promotion of Methanol Fueled Vehicles, accelerate deployment of M100 vehicles especially in regions of Shanxi, Shannxi, Guizhou and Gansu that have extensive methanol production resources and operational experiences. Encourage Methanol passenger cars in service and taxi fleets. Expand methanol commercial vehicles in municipal duty and logistics.

Execute Emission Standards Firmly, Methanol passenger cars should comply with China National 6 emission standard with methanol and formaldehyde emission limits of 2.5 mg/km respectively. Methanol heavy-duty vehicles should comply with China National 6 emission standard of heavy-duty diesel vehicles with methanol and formaldehyde emission limits of 20 mg/kwh respectively.

Other Promotional Measurements including to normalize methanol vehicle registration with no limitation. Research to include methanol vehicles into "Passenger car producer average fuel consumption and new energy vehicle credits, also called Double Credit Scheme."

"As the global methanol industry trade association, the Methanol Institute (MI) has enjoyed a strong working relationship with China's MIIT to facilitate the exchange of information regarding methanol vehicles," said MI CEO Gregory Dolan. "The Chinese central government has announced that methanol fueled cars, trucks and buses are ready for commercial introduction. We welcome this policy which marks a critical guidepost for countries around the world in the use methanol as a clean and affordable transportation fuel."

"Based on the characteristics of China's resource endowment and the development status of methanol vehicles, promoting the development of methanol vehicles is in line with China's national conditions, which is not only conducive to giving full play to China's coal resources advantages, promoting the transformation and upgrading of traditional industries, but also promoting the development of green recycling and diversifying energy source and to ensure national energy security." as MIIT noted in <u>policy explanation</u> guidance issued today.

With this policy, Chinese customers can choose to purchase a methanol-fueled vehicle in the marketplace and register vehicles with no limitations. Within five years, the fleet of M100 vehicles in China could reach 50,000 cars, trucks and buses, consuming more than 500,000 metric tons of methanol (166 million gallons/628 million liters).

Chinese OEMs like Geely Auto, First Automobile Work (FAW), Yu Tong Bus, Sino-truck, etc. have produced a number of methanol vehicle models, 32 of which have been certified by MIIT. Geely Auto has been at the forefront of the commercial introduction of methanol cars, with methanol engine plants and methanol vehicle manufacturing bases in the cities of Jinzhong, Guiyang and Nanchong, with total production capacity of over 300,000 units per year.

Some Chinese local governments like Shanxi, Guizhou and Xi An City have announced local policies to promote their own methanol fleets including vehicle subsidies, less driving lane limits, and free public parking, etc. The foundation of such vehicle programs is China's domestic methanol industry, as the world largest methanol producer and consumer, China consumed about 45 million tons of methanol in 2018 (15 billion gallons/57 billion liters), and more than 25% of this demand is in fuel applications. For more information, please download our free white paper on <u>"A Brief Review of China's Methanol Vehicle Pilot and Policy"</u> from the Methanol Institute's web site at www.methanol.org.