



Hydrogen Economy Plan in Korea

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Introduction

The long debate on next generation cars in Korea has come to a conclusion that the Korean government will take hydrogen cars' side to become the next economic growth engine instead of the Electric Vehicles. The government will still maintain some supports for EV development to pursue ecofriendly car, but the further development of hydrogen cars will receive more R&D funding than EVs. On 17th of January, 2019, The Korean governments (Ministry of Trade, Industry and Energy (MOTIE), Ministry of Economy and Finance (MOEF), Ministry of Science, Technology and ICT (MSIT), Ministry of Environment (MOE), Ministry of Land, Infrastructure and Trade (MOLIT) and Ministry of Oceans and Fisheries (MOF)) have officially announced the road map of Hydrogen Economy. The main goal of this roadmap is to create an ecosystem of hydrogen industry including energy production, storage, transportation, safety and harnessing its use (i.e. mobility). By doing so, it is expected that hydrogen economy will be the next growth engine to create 43 trillion Won (approximately 24 billion euros) in economic value and 420,000 jobs by 2040.

Current situation in Korea

For many years, Korea has been facing a lot of societal problems such as fine dust, an increase in unemployment rate and a slowdown in economic growth. The Korean government is hoping that the solutions for these problems can be solved by supporting and investing in the development of the hydrogen economy at a national level. The semiconductor industry and automotive industry are two core industries of Korea. Therefore, it is expected that the support of hydrogen powered car development can lead to an immediate impact on job creations.

Aiming High

The goal of Korean government plans to foster an increase in the number of hydrogen powered cars from 2,000 in 2018, 4,000 in 2019 to 6.2 million by 2040 and make the country the No. 1 producer of hydrogen powered cars and fuel cells globally by 2030. At the moment, there are only 14 charging station in Korea, but the government will plan to boost the number of charging stations to 310 locations by 2022 and 1,200 by 2040. The government will also look to introduce 40,000 hydrogen-fueled buses, 80,000 taxis and 30,000 trucks as well as nurturing the domestic manufacture of appropriate auto parts by 2040. Not only will they support the development of hydrogen car, but the Korean government will also support the development of hydrogen ships, trains and machineries.

The government will also promote the manufacturing of fuel cells or power generation to reach a combined capacity of 15 gigawatts by 2040. Also, it will look to supply a combined 2.1 gigawatts of fuel cell capacity to homes and buildings by 2040. This will provide enough power for 940,000 households.



Strategies to support the hydrogen industry

The government will first form a Hydrogen Economy Promotion Council which consists of six different ministries plus some private companies. The Council will be led by the Prime Minister. Afterwards, the government will build a Hydrogen Industry Cluster to foster R&D cooperation between knowledge institutes, companies and organizations from 2021. This place will be a testbed for demonstrating newest technologies. Furthermore, by 2022, the government will select three cities as a national H2 testbed city. The city will be a model city where the housing, transportation, industries and so on are operated by the hydrogen power.

Conclusion

In order to lead the hydrogen market, both the public and private sectors in Korea will actively search for international cooperation and participate in global networks such as International Partnership for [Hydrogen and Fuel Cells in the Economy](#) and [Hydrogen Council](#) and so on. Furthermore, there will be more active international technology cooperation in various value chains of the hydrogen economy. Technologies for producing, storing, transportation, carbon capture technology for LNG extraction type hydrogen production plant, application of hydrogen power and so on will be most interesting topic for Koreans to collaborate with. In the end, aiming to export to European market, Korean governments and private sectors will actively collaborate with European companies.

Source

<https://www.electrive.com/2019/01/17/korea-presents-hydrogen-economy-plan/>

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