

Popular translation

[Linguistics](#), [English](#)



Making Hydrogen Fuel-cell Cars Reality Making Hydrogen Fuel-cell Cars Reality Chemical engineering is one of the branches of engineering that deals with the physical and life sciences. Moreover, it also includes economics and mathematics in its field that transforms energy, chemicals and various materials to finished products. In this area, there are many challenges that engineers face when carrying out their activities. Therefore, one of the most critical problems is to make hydrogen fuel-cell cars a reality. According to most engineers, it could even take decades for engineers to realize the production of hydrogen cheaply and in large quantity (National Research Council 2003). Similarly, implementing the use of hydrogen fuel cell cars is another problem that can take decades. Engineers have tried unsuccessfully to come up with inexpensive hydrogen-powered fuel cells. Creating extensive storage facilities and transportation infrastructure for these vehicles is also a problem.

However, chemical engineers have the potential to provide solutions to this problem through thorough research. When comparing hydrogen fuel cells and internal combustion engines, you will find that fuel cells produce power at a higher cost of more than \$ 2, 000 per kilowatt. On the other hand, internal combustion engines generate power at a lower cost of around \$35 per kilowatt. Therefore, this makes it expensive for the public. In terms of the operating lifetime between the two, internal combustion engines have at least 5, 000 hours of driving compared to the 1, 000 hours of fuel cells (National Research Council 2003). Therefore, fuel cells wear out faster than internal combustion engines. For example, if a person buys a new car he or she expects it to last for about 10 or more years. It is about 3, 000 or more

hour of driving time. In case you use fuel cell which only last for 1, 000 hours, then practically it is not quite right. As chemical engineers, we can solve this critical and technical issue of making hydrogen fuel cells a reality and replace internal combustion engines but it would take time.

Reference

National Research Council. (2003). Beyond molecular frontiers: challenged for chemistry sciences and chemical engineering. Washington, DC: The National Academies Press.