

Date May 13, 2010

Term **Hydrogen fueled vehicles**

Proposed by mklieber

Citation(s)

Definition

A hydrogen vehicle is an alternative fuel vehicle that uses hydrogen as its onboard fuel for motive power. The term may refer to a personal transportation vehicle, such as an automobile, or any other vehicle that uses hydrogen in a similar fashion, such as an aircraft. The power plants of such vehicles convert the chemical energy of hydrogen to mechanical energy either by burning hydrogen in an internal combustion engine, or by reacting hydrogen with oxygen in a fuel cell to run electric motors. Widespread use of hydrogen for fueling transportation is a key element of a proposed hydrogen economy.

Hydrogen fuel does not occur naturally on Earth and thus is not an energy source, but is an energy carrier. Currently it is most frequently made from methane or other fossil fuels. However, it can be produced from a wide range of sources (such as wind, solar, or nuclear) that are intermittent, too diffuse or too cumbersome to directly propel vehicles. Integrated wind-to-hydrogen plants, using electrolysis of water, are exploring technologies to deliver costs low enough, and quantities great enough, to compete with traditional energy sources.

Many companies are working to develop technologies that might efficiently exploit the potential of hydrogen energy for mobile uses. The attraction of using hydrogen as an energy currency is that, if hydrogen is prepared without using fossil fuel inputs, vehicle propulsion would not contribute to carbon dioxide emissions. The drawbacks of hydrogen use are low energy content per unit volume, high tankage weights, the storage, transportation and filling of gaseous or liquid hydrogen in vehicles, the large investment in infrastructure that would be required to fuel vehicles, and the inefficiency of production processes. ([http://en.wikipedia.org/wiki/Hydrogen\\_vehicle](http://en.wikipedia.org/wiki/Hydrogen_vehicle))

Scope note (if needed)

Notational code **Qbddpj**

Broader term **Vehicles by motive power (Qbddp)**

Narrower term

Associative relationships

Related terms:

**Fuel cell vehicles (Qbddpef)**

Cross-references:

USE/UF terms

Variant forms

Homographs

Usage/Warrant/Statistics (# of hits/search results for term in quotes, e.g., "automobile factories")

- Search term, variants, and/or synonyms identified if necessary
- Use a minimum of five sources
- Note currency of term usage

CATALOGS	TI	KW	SU	AB
<a href="#">NTL Digital Repository</a>	0	13	0	0
<a href="#">VDOT OneSearch</a>				
<a href="#">DOT HQ</a>	0	0	0	0
<a href="#">FHWA</a>	-	-	-	-
<a href="#">NUCAT (NUTL)</a>	0	2	0	0
<a href="#">TranWeb (NUTL)</a>	0	0	0	0
<a href="#">NTIS</a>	5	7	7	16
<a href="#">TRIS Online</a>	2	18	0	16
<a href="#">UMTRI</a>	-	-	-	-

<a href="#">RiP</a>	-	-	-	-
<a href="#">VDOT</a>	0	0	0	0
<a href="#">WorldCat</a>	24	54	3	54
<a href="#">Google StateDOT</a>				
<a href="#">Google Scholar</a>				
Other thesauri, taxonomies, or schemes <a href="#">LCSH</a> <a href="#">Taxonomy Warehouse</a>				

Other/Comments

LCSH: sh 95004134 (Hydrogen cars) -- RT2: Hydrogen fuels -- Suggested notation: Qbddpj -- If added, TRIS search needed to add term  
Only one NTL KW hit in singular form

**Action**             **Add**                     Update             Decline  
                          Remove                     Park

**Type**                 **Preferred term**    Non-preferred term