

Digest of Green Reports and Studies

Title	<i>Effects of a Transition to a Hydrogen Economy on Employment in the United States -- Report to Congress</i>
Author	United States Department of Energy
Organization	United States Department of Energy
Author Contact	http://www.energy.gov/
Publication Type	Policy Paper
Publication Date	July 2008
# of pages	66pp
URL	http://www.usfcc.com/Fuel%20Cell_Hydrogen%20Employment%20Study_final.pdf
Summary	<p>This report estimates the employment impacts of a transformation of the U.S. economy to the use of hydrogen between 2020 and 2050; using an established economic analysis model called 'IMPLAN'. The report considers:</p> <ul style="list-style-type: none"> • Replacement effects of new goods and services • International competition • Workforce training requirements • Multiple possible fuel cycles, including usage of raw materials • Rates of market penetration of technologies • Regional variations based on geography • Specific recommendations of the study
Key Findings	<p>The report estimates a cumulative job creation and job replacement within several industrial sectors that will be the key to the expansion of hydrogen markets in the following sectors.</p> <ul style="list-style-type: none"> • Automotive Sector, • Hydrogen Production, • Petroleum Refining, and • Construction
Recommendations	<p>The study highlights possible skill and education needs to support the associated industries and technologies. It recommends two major types of training; one is the initial training for workers starting their careers with no previous training and the second is the re-training for workers already trained in gasoline engine technology. The report also lays out a vision in addition to the specific skill requirements of the fuel cell industry; future education of the next generation should be focused on skill sets to have the ability to adapt to changing technologies.</p>
Definition of Green	N/A
Methodology	Study
Data Sources cited	Dept. of Energy, VISION, Bureau of Labor Statistics, and U.S. International Trade Commission.
Report Geography	<p>Five contrasting geographic regions illustrate the potential for differences in the impacts of a transformation to hydrogen across the nation. These regions include:</p> <ul style="list-style-type: none"> • Upper Midwest • Lower New England and Upper Mid-Atlantic • California • Tennessee • Houston/Galveston area
Green Occupations	<ul style="list-style-type: none"> • Electrical Engineers • Electronics Engineers • Chemical Engineers

	<ul style="list-style-type: none"> • Automotive technicians and Mechanics (existing occupation to re-tool to hydrogen technology) • Assembly line workers • Workers involved in delivering and dispensing fuel to automobiles
Green Industries	<ul style="list-style-type: none"> • Manufacturing- Hydrogen powered vehicles and service industries • Electric Power Generation, Transmission and Distribution (NAICS code 221100)
Key Words	Hydrogen fuel, fuel cells, technology, efficiency, transformation, engineers, technicians, and mechanics.
Legislation cited	Energy Policy Act of 2005 sec. 1820; Public Law No. 103-62: U.S. Congress No. 109-58
Bibliography	N/A
Reviewer Name/org.	Anita Singh/ California LMID