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Review of: Peter Hoffman, *Tomorrow's Energy: Hydrogen, Fuel Cells, and the Prospects for a Cleaner Planet*

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Abstract

Review of the book: Peter Hoffman, *Tomorrow's Energy: Hydrogen, Fuel Cells, and the Prospects for a Cleaner Planet* (MIT Press 2001). Illustrations, Foreword, Acknowledgments, Notes, Index. ISBN 0-262-08295-0 [289 pp. \$32.95. Cloth, 5 Cambridge Center, Cambridge, MA 02142- 1493].

Keywords

hydrogen, alternative fuel, transportation

Erratum

The citation for this review is *13 RISK 177 (2002)* in most commercial databases.

Peter Hoffman, *Tomorrow's Energy: Hydrogen, Fuel Cells, and the Prospects for a Cleaner Planet* (MIT Press 2001). Illustrations, Foreword, Acknowledgments, Notes, Index. ISBN 0-262-08295-0 [289 pp. \$32.95. Cloth, 5 Cambridge Center, Cambridge, MA 02142-1493].

Tomorrow's Energy: Hydrogen, Fuel Cells, and the Prospects for a Cleaner Planet, by Peter Hoffman, discusses current research on creating a hydrogen-based economy, the history of hydrogen energy, and the environmental dangers caused by fossil fuels. Hoffman begins his book with an overview of the possible uses and benefits of hydrogen. Two major goals of international hydrogen research have been to find economical ways of making the fuel and to find out how to store it effectively onboard a space-constrained car, bus, or truck.¹

Hoffman journeys through the history of hydrogen from the first experiments dating back to the fifteenth century to Jules Verne in 1874 to the boom in the early twentieth century leading to today's uses and developments. A few key developments include: the National Hydrogen Association, launched in Washington in 1989; a fuel cell power plant, which began operation in California in 1996; and BMW's plan to offer the world's first commercially available hydrogen-fueled car in 2001.²

Hoffman further discusses how to produce hydrogen from water, natural gas, and green plants.³ The proven process for making hydrogen on an industrial scale from water is electrolysis, used in countries such as Canada and Norway.⁴ Another technique is thermo-chemical water splitting which uses heat and chemicals to break down the water into its elements.⁵ Most of the world's hydrogen proponents say the future of production rests in stripping hydrogen from fossil fuels through various chemical processes.⁶

¹ Peter Hoffman, *Tomorrow's Energy: Hydrogen, Fuel Cells, and the Prospects for a Cleaner Planet* 10 (MIT Press 2001).

² *See id.* at 46-51.

³ *See id.* at 54.

⁴ *See id.* at 59.

⁵ *See id.* at 65.

⁶ *See id.* at 66.

Hoffman asserts that there is no longer any real question that advanced transportation technologies employing hydrogen as an energy medium will be essential for the twenty-first century.⁷ The difficulty lies in how to carry hydrogen onboard a vehicle. Hoffman reviews the various experiments and ideas used to succeed, but submits that there are no easy answers. He states that fuel cells are the leading technology right now and are also the ones being explored the most.⁸

Peter Hoffman does a wonderful job explaining thoroughly the history and future of hydrogen as a fuel. He believes it is essential to the planet and the economy for hydrogen use to be further developed.

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⁷ See *id.* at 102.

⁸ See *id.* at 160.

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