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Book review

The Phoenix Project: Shifting from Oil to Hydrogen, 2nd Edition

Harry Braun; SPI Publications, Phoenix, AZ, USA, 2000, xv+365 pp.

The main concern of this book is to make a powerful appeal for shifting the energy base of our industrial economies from petroleum to hydrogen as a prescription for "prosperity without pollution". This is supported by a detailed exposition of the harmful environmental and political consequences of the continued dependence on fossil fuels for the rapidly expanding energy needs of industrial societies. The author produces a convincing case for hydrogen as the only fuel alternative that meets all the energy needs of the world's rapidly advancing civilization without any detriment to the environment, and has a host of other advantages that makes it a perfect energy choice. The main part of the book, spread over three chapters in the middle, is devoted to detailed reviews of the technical features of hydrogen and the wide variety of renewable energy sources and technologies that could be deployed for its mass production.

To allay popular apprehensions about the price factor of the hydrogen alternative, it is pointed out that if the *external costs* of petroleum usage, such as compensation for damage to public health and property, and the military costs of protecting the oil supply lines are incorporated in the cost accounting process, the market price of petroleum will shoot up sharply. In contrast, no such external cost elements appear in the use of hydrogen as fuel. Hydrogen combustion is totally pollution free, and, since its parent source, water,

is regenerated on combustion, there is no risk of resource depletion.

Thousands of scientists and energy specialists, from over 80 countries across the world have endorsed the urgency of initiating the oil-to-hydrogen transition. Major oil companies and automobile manufacturers are also ready to cooperate in the venture. What is needed to get it going is the active involvement of governments. Elected governments, as a rule, tend to be overly cautious when dealing with proposals that impact the people in their daily life. But, governments can be moved by the people to change their attitude. In the final analysis, therefore, what is needed now is a mass educative program to convince the people at large, of the urgent need to change their energy base to one that will assure them of *prosperity without pollution*.

The book under review is a splendid effort in this direction. It provides a well-documented overview of how the USA and other countries can rapidly shift their energy base from oil to hydrogen and, thereby, avert the impending environmental dangers to life on our planet. The technical background is organized in logical sequence and presented in mass appeal style, without, however, omitting or diluting vital details. The book will be of special interest to policy making bodies in governments and industries.

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