

Why We Need The Solar–Hydrogen Economy Now

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Why We Need The Solar–Hydrogen Economy Now
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World Permanent Oil Crises

In Chinese, the word "crisis" or "wei–chi" translates into "danger + opportunity". We are certainly living in "revolutionary" times which provides lots of opportunities. Today's energy systems did not arise just through the hidden hand of market forces; although, markets played an important role. Technology advances also played a major role. There are three concerns that compel us to rethink U.S. energy strategy—our environment, our economy and our security.^{1, 5c}

Our addiction to fossil fuels (coal and oil) is literally killing us. Fuel combustion from automobiles and power plants is the primary source of large numbers of the health and crop–damaging and global warming air pollutants. Oil alone is responsible for smog, nitrogen oxides, sulfur oxides, and harmful volatile organic compounds (VOCs). This urban air pollution is indirectly responsible for killing an estimated 310,000 Europeans and 50,000 Americans each year.^{2a–d} To this, we must add the regional and global destruction of forests, crops and fish by acid rain. For example, over 50% of the Black Forest in Germany is denuded and the soil pH is so acidic from the acid rain and VOCs that it will not support new saplings.^{3a} In addition, green–house gases and their global warming consequence are causing harsh droughts, devastating floods and decline in crop yield.

Health effects of air pollution range from minor irritation of eyes and upper respiratory system to chronic respiratory disease, heart disease and, lung cancer. For example, air pollution has been shown to aggravate the frequency and severity of asthma attacks. Both short–term and long–term exposures have also been linked with premature mortality and reduced life span.^{3b}

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In San Jose, Costa Rica, the problem of smog is dramatic since the entire central valley is adversely affected. A survey has shown that 60% of the tourists have no desire to return due to high levels of air pollution. The "San Jose flu" is the nickname given for a sore throat due to air pollution. There is a major international effort being initiated to assist Costa Rica in making a rapid transition to the Solar–Hydrogen Economy.