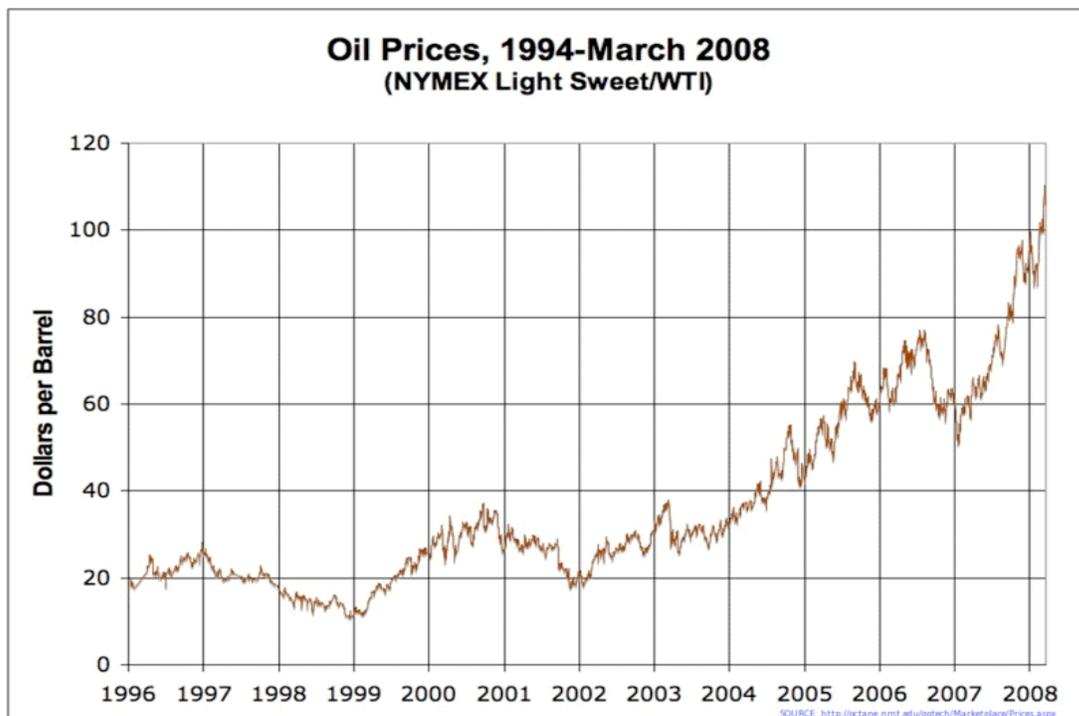


## Peak Oil

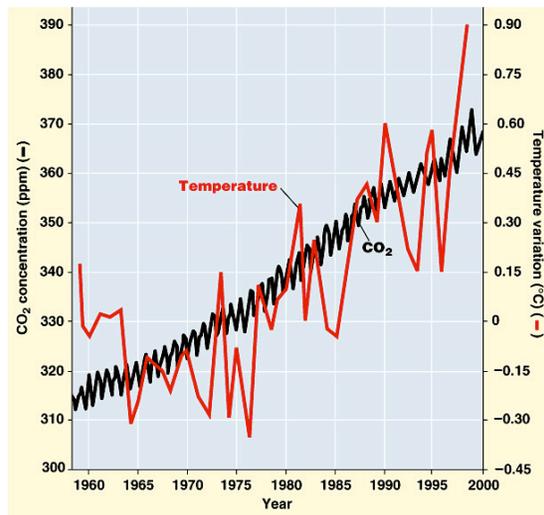
Eric R. Pianka

Fossil fuels (coal, oil, and natural gas) were formed hundreds of billions of years ago by primary producers long before there were any people. During the last century, humans have burned up much of these supplies. As human populations burgeon and economies grow, demand for limited supplies has driven up the price of oil. Although some fools delude themselves into thinking that oil replenishes itself deep in the Earth, it does not. Oil is a finite resource and we are rapidly running out of it. Unfortunately, humans have become very dependent upon fossil fuels because they are portable, concentrated, and easily stored and transported. Other energy sources, such as sun, wind, and electricity are not nearly as versatile.



Some pseudo-scientists under the payroll of big oil assert that oil supplies are adequate to get us through to the end of 2100, but no

one knows how long dwindling supplies will last in the face of rapidly increasing world wide demand.



Burning of fossil fuels has released large amounts of carbon dioxide levels into Earth's atmosphere. By reflecting heat back to the planet that would otherwise radiate out into space, greenhouse gases such as CO<sub>2</sub> and methane have warmed the Earth's land surface and oceans (see global warming).

Until the advent of agriculture about 10,000 years ago, humans were hunter gatherers -- many fewer of us existed. Agriculture allowed humans to increase in population density, ultimately leading to the present day overpopulation crisis. We could never have reached 6.6 billion without fossil fuels. Basically, humans exploited these one-time fossil energy reserves to demolish many of Earth's natural ecosystems and turn them into arable land and crops to feed increasing numbers of people. We replaced the tall grass prairies of North America with fields of corn and wheat and turned bison herds into cattle, ultimately into masses of humanity.

The ancient deep black topsoils of the prairies made America a 'bread basket' for the world, allowing us to export grains to less fortunate peoples in other parts of the world without access to such amenable climates and rich soils. Sustained agriculture depletes the nutrient pools of soils -- in order to maintain production, soils must

be fertilized with nitrogen and phosphorus and other minerals. Animal wastes such as bat and bird guano were used as fertilizers until they began to be depleted. Then, just as such natural fertilizers were running out, the Haber-Bosch process was discovered, which allowed natural gas to be turned into fertilizer. Without this technological breakthrough, human populations would have become limited by food supplies long ago and at much lower population densities. Technology lures us out on to thin ice, and we now face population overshoot. Our enormous population, now well above the level Earth can support, must soon crash, accompanied by famines and massive human misery.

Americans are now suffering from painful increases in the cost of gasoline at the pumps with no end in sight. People are clamouring for alternative new sources of energy such as nuclear energy. Many seem to think that we don't have to obey laws of thermodynamics. Using energy always produces heat, and unless it is dissipated, temperatures must rise.

Because people have electrical outlets all over their houses and offices, they suffer from the illusion that electricity is clean energy, infinite in supply and will always be there. None of these assumptions is true -- power grids must ultimately fail and the internet will cease to be. Whenever you turn on a light or an air conditioner, chances are that fossil fuel is being burned to generate the electricity you're using. A relatively small amount of electricity is generated by other sources such as by wind, hydro-electric, and/or solar energy. When you turn on a light, you are releasing solar energy captured by plants millions of years ago -- essentially, you are being illuminated by fossil sunlight that fell on the Earth long ago. Unfortunately, electricity is difficult to store and usually must be used immediately. Battery technology to improve our ability to store electric energy has been painfully slow.

Our economic system based on continual growth must be replaced by a sustainable system where each of us leaves the planet in the

same condition that it was in before we were born. This will require many fewer of us and much less extravagant lifestyles. We won't be able to move around so freely (airplanes will become a thing of the past) and we will have to go back to walking and riding horses. In addition, humans will have to be more spread out, living without big cities. Before it is all over, we are going to have to limit our own reproduction, un-invent money, control human greed, revert back to trade and barter, and grow our own crops, among other things.

## Links

Realistic Perspective on [The Decline of Oil Supplies](#)

Wikipedia: [Peak Oil](#)

Encyclopedia of Earth: [Global Warming](#)