

The Coming Energy Crisis

Petroleum is running out even as consumption increases. We need alternatives if worldwide economic chaos is to be averted and the survival of mankind ensured. By Stephen Porter



We are in trouble. Global conventional oil production peaked in 2000 and has remained level since then. We are at the top of the “bell curve” for global oil production. This is as high as production is going to get. As OPEC President Purnomo Yugisantoro said in August 2004, “There is no additional supply.” Experts believe that we will start sliding down the back of the bell curve in 2008. The decline in oil production will be precipitous—even as dependence on it has grown to the point that survival depends on a steadily increasing supply. By 2025, global oil production is predicted to be reduced by about 50%. Mankind is about to go over a cliff, and we drive on without a care.

Of course, we will know all of this for certain after it has happened, when we have the benefit of hindsight. But we do not need to wait till then. Oil experts are shouting the news from the rooftops already. (Do an Internet search for “peak oil” or “oil production peak” and see for yourself.) How many are listening?

Unless alternative sources of energy, such as wind, solar, and geothermal energy, are

developed very soon, it will not be possible to develop them at all. That's because, till they are developed, production and transportation depends on oil. The deployment of alternatives should therefore be in an advanced stage before oil production begins to fall off. Otherwise, we will have very few alternative sources of energy when oil supply declines.

If we continue on our present course, the human population on the planet will experience a significant die-off while oil production falls. Biologists looking at parallels in nature and human history suggest that there is a balance between populations and their energy base. When the population exceeds its energy base, it will decline until balance is restored. For mankind without oil and without a replacement for oil, the decline in population may be about 90%.

Alternative sources of energy

The only hope for the bulk of mankind to survive is to develop alternatives to oil now, before oil begins its decline. Several feasible long-term alternatives are already in development. As a fuel for cars, compressed air is a practical possibility. A car is being developed in France today that can go 300km on a tank of compressed air. It takes only \$2 of electricity to fill the tank. The car has an onboard air compressor, so all one needs to do to refill the tank is plug in the car each night in order to drive all day next day. Alternatively, “filling stations” can offer a quick recharge from large compressed air tanks.

Heat for homes and electricity for the power grid can be provided by wind, solar, and geothermal energy. All of these can be applied on a small scale to generate heat and power for homes and businesses. The enormous amount of energy needed for national electrical grids can be supplied cost-effectively by large wind turbines. The installation of millions of wind turbines around the world could replace the loss of energy from the decline in hydrocarbons. Variations in the amount of wind in local areas can be offset by having grid-connected wind turbines widely distributed, so that the amount of wind averages out. In this way, wind, for example, becomes a reliable source of electrical power.

Conclusion

As oil production falls and global consumption continues to climb, oil prices will rise. Everything that depends on oil will also go up in price. Alternatives to oil should be developed while the price of oil is affordable. If we wait, not only will the cost be higher, but the money available will be less because the global economy will begin to contract, unemployment will soar, and government revenues will decline. By some estimates, demand for oil will exceed supply starting about the middle of 2005. So the rise in oil prices may not be that far off.

Everyone knows that hydrocarbons are a finite resource and will run out one day. But the general belief is that we have at least two or three decades before this happens. The surprise is that conventional oil production is peaking **now**, and that problems begin **now**, when production levels off and then starts to decline. The growth of the world economy needs energy, and if oil is peaking then the energy for growth can no longer come from oil. Unless alternatives to oil are found and developed, the world economy will stall and then contract in step with declining oil supplies. The population of the planet is faced with an emergency unlike any it has faced before. We can fight like rats over a declining resource until no oil and no people are left, or we can work together on a planetary scale to usher in a new post-hydrocarbon era of peace and prosperity for all.

It would be good for those who can see what is happening to let others know. We need to change set ways of thinking and get our political leaders to act. We need to work on alternative sources of energy. Only collective action now can save the situation.

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Hard Facts

World oil production peaked in 2000 and may start contracting as soon as mid-2005. It may decline as much as 50% by 2025.

In the 16-year period from 1988–2004, world oil demand rose 25%. European consumption is up 16%, US consumption up 18%, Japan's up 25%, and China's up 175%.

Wait and See

All great crises were ignored until it became too late to do anything about it.

– *Matthew Simmons, Speech at meeting of Association for Study of Peak Oil, May 2003.*

[Transcript of speech](#)

Some Say Inevitable

Under the best of circumstances, if all prayers are answered there will be no crisis for maybe two years. After that it's a certainty.

– *Matthew Simmons, Energy Advisor to President George W Bush, August 2003.*

Passing Through

It is more than likely that if man were to disappear from the face of the earth, for whatever reason, there is a modest, unobtrusive creature somewhere that would develop into a new form and take our place.

– *David Attenborough, Life on Earth*

SIDEBARS
(1979)