

Peak Everything

by Richard Heinberg

This is an excerpt from the introduction to Richard Heinberg's recently published book *Peak Everything: Waking Up to the Century of Declines*

Petroleum is not the only important resource quickly depleting. Regional production peaks for natural gas have already occurred and the economic consequences of gas shortages are likely to be even worse for Europeans and North Americans than those for oil. Studies show global coal production will peak and begin to decline in 10 to 20 years. Because fossil fuels supply about 85 percent of the world's total energy, peaks in these fuels virtually ensure that the world's energy supply will begin to shrink within a few years regardless of any efforts that are made to develop other energy sources. In the course of the present century, we will see an end to growth and a commencement of decline in all of these parameters:

- Grain production (total and per capita)
- Uranium production
- Fresh water availability per capita
- Arable land in agricultural production
- Wild fish harvests
- Yearly extraction of some metals and minerals (including copper, platinum, silver, gold, and zinc)

We are at the beginning of a period of overall societal contraction. The only real question is whether societies will contract and simplify intelligently or in an uncontrolled, chaotic fashion. On the intelligent side, there are some good things that are not at or near their historic peaks

- Community
- Personal autonomy
- Satisfaction from honest work well done
- Intergenerational solidarity
- Cooperation
- Free time
- Happiness
- Ingenuity
- Artistry
- Beauty of the built environment

These are the types of categories that make up the Genuine Progress Indicator (GPI) that many economists and non-governmental organizations have promoted while criticizing governmental reliance on Gross Domestic Product (GDP). While a historical GDP chart for the U.S. shows general ongoing growth up to the present, GPI calculations show a peak around 1980 followed by a slow decline.

We must focus on and use the intangibles that are *not peaking* (such as ingenuity and cooperation) to address the problems arising from our overuse of substances that *are*. International studies of self-reported levels of happiness show that, once basic

survival needs are met, there is little correlation between happiness and per-capita rates of consumption of fossil fuels. The sense of community and the experience of intergenerational solidarity are literally priceless, in that no amount of money can buy them; moreover, life without them is bleak indeed.

Addressing the economic, social, and political problems ensuing from the various looming peaks will require enormous collective effort. Enlisting people in that effort will require educating and motivating them in numbers and at a speed that has not been seen since World War II. Part of that motivation must come from a positive vision of a future worth striving toward. People will need to feel that there will be an eventual reward for what will amount to many years of hard sacrifice.

They must feel that their efforts will lead to a better world, and tangible improvements in life for themselves and their families. A reversion to the normal pattern of human existence, based on village life, extended families, and local production for local consumption—especially if it were augmented by a few of the frills of the late industrial period, such as global communications—could provide future generations with the kind of existence that many modern urbanites dream of wistfully. So the overall message is not necessarily one of doom—but it is one of inevitable change.

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Moving Away from Fossil Fuels

Our central survival task for the decades ahead, as individuals and as a species, must be to make a transition away from the use of fossil fuels—and to do this as peacefully, equitably, and intelligently as possible.

The post-peak decline in availability of oil, natural gas, and coal—if our dependence on these fuels continues unabated—could trigger economic collapse, famine, and a general war over remaining resources. While it is certainly possible to imagine survivable transition strategies away from fossil fuels involving proactive efforts to develop alternative energy sources on a massive scale and to create policies mandating energy conservation, also on a massive scale, the world is currently as reliant on hydrocarbons as it is on water, sunlight, and soil. Without oil for transportation and agriculture; without gas for heating, chemicals, and fertilizers; and without coal for power generation, the global economy would sputter to a halt. While no one envisions these fuels disappearing instantly, we can avert the worst-case scenario of global economic meltdown—with all of the human tragedy that implies—only by proactively reducing our reliance on oil, gas, and coal ahead of depletion and scarcity.