

Policy Pennings by Dr. Daryll E. Ray

# Energy: Choose your crystal ball

When the markets are jittery, it doesn't take much to send prices accelerating one direction or the other. On Thursday, March 31, 2005, investment banking and securities firm Goldman, Sachs issued a report raising the possibility of a super spike in oil prices that could drive crude oil up by more than \$50 a barrel to as high as \$105 a barrel. In response, oil prices surged to set a new record by reaching \$57.50 a barrel on Friday, April 1, 2005.

In earlier columns, we have looked at possible short-term effects of higher energy prices on farmers and the ways in which the availability of inexpensive oil transformed the nature of US agriculture and rural communities over the course of the twentieth century. Today we want to look at one of the long-term issues that is driving the current surge in crude oil prices: oil is a finite resource.

For as long as we can remember, experts have been talking about a looming energy crisis. Certainly, almost everyone recognizes that fossil fuels are a finite resource and that at some time society is going to have to transition to another source of energy. That concern, in part, was included as justification for President Eisenhower's Atoms for Peace program and the development of a nuclear energy program in the US with many of the nuclear power plants that are in existence today being built in the late 1950s and early 1960s.

With coal, the predictions are that the US has enough coal reserves to last for nearly 300 years if consumption continues at today's rate. Crude oil is another matter. US production of crude oil peaked in 1970. Since then, the US has been dependent on the importation of oil from other nations, particularly in the Middle East.

The concern of many is not that the world has run out of oil, but that just as US production hit a peak and has been on a long slow decline, the same will be true for the world as a whole. Oil geologists predict that the world peak in production will occur sometime between today and 2020. Once peak production occurs, oil producing countries will not be able to expand their production capacity to meet the ever increasing demand for petroleum energy. One of the factors in the current high prices is the increasing consumption of oil to fuel the growing economies of China and India.

While many people agree that peak oil production will occur sooner or later, there is significant debate on what the impact of that production limitation will be. The optimists argue that high prices, brought about by inability of oil producing nations to keep up with demand, will stimulate investment, research, and innovation that will enable society to overcome the current crisis and

meet the world's energy needs with new technology. They point to the fact that each time society has been faced with a natural resource limitation, innovation has provided a solution.

During World War II, natural rubber supplies were restricted, investments were made, and synthetic Petroleum-based rubber was brought into the market. In the 1960s, many leaders were talking about a pending humanitarian crisis because food production would not be able to keep up with a growing population. Since then, the world population has increased dramatically but the problem farmers face is low prices resulting from their ability to produce more than the world can purchase at profitable prices. The expectation of the optimists is that, like with these cases, human ingenuity will rise to meet the challenge of providing society with a source of clean energy at a price it can afford.

The pessimists, on the other hand, argue that there is no other readily available source of easily-portable energy that can replace crude oil when the demand begins to outstrip supply. They contend that society in general and US society in particular will have to undergo a radical transformation as it transitions into an era of increasingly scarce and thus high-priced energy. Richard Heinberg, in his book "The Party's Over" examines each of the alternative sources of energy that have been proposed to meet the need for fuel in an energy-hungry world. One by one he eliminates the various alternatives as too costly, subject to very real physical limitations, and/or environmentally devastating. He argues that humanity is going to have to learn to function in a world where per capita energy consumption will be on a long, steady decline.

It is difficult to identify with any degree of certainty which scenario is the more likely to occur. It is our guess because both of arguments contain a germ of truth, that the future reality will be somewhere between the two extreme visions. Given the energy intensive nature of agriculture, it is certain that farmers will have to pay more attention to energy issues in the future than they have in the past.

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