Why we should continue support for renewable fuels despite falling oil prices

Stephanie Page, Renewable Energy Specialist
Oregon Department of Agriculture
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This summer, as gasoline prices reached $4 per gallon and diesel approached $5, ethanol and biodiesel became attractive to consumers because of their lower price in addition to their environmental and energy security benefits, and the creation of domestic jobs and wealth.

With the recent economic downturn, energy prices have plummeted. Gasoline is below $2 per gallon and diesel is well under $3. Ethanol and biodiesel are now more costly per gallon than gasoline and diesel.

Some American consumers may wonder if the current situation is similar to the energy crisis of the 1970s, which caused only temporary spikes in energy prices. However, key factors indicate the current situation is significantly different, and it is critical that we continue to support diversification and strategic management of our energy supply.

Long Term Supply Forecasts Tight

The American energy crisis of the 1970s occurred when Middle Eastern member nations of OPEC declared an embargo against the United States for its support of Israel during the Yom Kippur war. With significant reliance on oil from this region, the U.S. is still vulnerable to this type of scenario. However, in 2008, a wide variety of factors contributed to oil price volatility.

Many experts believe that market speculation was a key driver in the 2008 energy price spikes. The falling U.S. dollar also translated into higher crude oil prices for the US. But the two biggest factors were tightening supplies and increased demand in developing countries. Although this demand has temporarily lessened due to the recession, it will continue to increase with middle class expansion in China, India, and other developing nations.

Some energy experts also assert that the world oil supply is close to its peak and will soon decline until oil supplies are exhausted. They cite the decline in world oil field discoveries, and the decline in oil production from two-thirds of the world's oil-producing countries. Some of the world's former top oil-producing countries have become net importers, thanks to declining production and increased demand. For example, Indonesia announced in November 2008 that it would withdraw from OPEC because it has become a net importer of oil. Mexico is also projected to become a net importer.

The International Energy Agency (IEA) estimates the world has a 40-year oil supply at current consumption rates. However, several factors affect whether this supply will actually be available, including long-term investment. IEA warns that huge investments will need to be made in harvesting existing oil supplies to feed world demand.

The U.S. Energy Information Administration's 2008 energy outlook predicts that between 2005 and 2030, world marketed energy consumption will increase by 50 percent, assuming current laws and policies remain unchanged. Strong economic growth and population growth in developing countries are the main factors in this consumption increase. Fossil fuels are assumed to continue supplying much of the energy used worldwide. The outlook further states that while prices may ease somewhat in the medium term as new production reaches the marketplace, supply will remain tight in the long term.

The IEA energy outlook predicts that pronounced short-term swings in prices are likely to remain the norm, and temporary price spikes or sharp falls cannot be ruled out. If corn prices experience similar swings, ethanol is also vulnerable to price spikes, but diversifying the fuel supply helps reduce the risk of impacts to consumers from high energy prices. For example, an Iowa State University report published earlier this year determined that ethanol was helping to reduce fuel prices in the United States by 30 to 40 cents per gallon by essentially increasing the capacity of the U.S. refinery industry, lessening some of the price spikes associated with refineries operating close to capacity.

Renewable energy, energy savings can help combat climate change

There is growing concern about the impacts of atmospheric greenhouse gas concentrations on the global climate. IEA's energy outlook predicts that if greenhouse gas emissions continue on their current trajectory, global average temperatures will increase by as much as 10 degrees Fahrenheit by 2100.

The Intergovernmental Panel on Climate Change reports that 56.6% of global human-caused greenhouse gas emissions result from fossil fuel use. International experts say it is critical for the world to find ways to lower emissions associated with energy use, and biofuels are one potential contributor. Biofuels, other renewable energy and transportation sources, and energy efficiency measures are all important solutions to decrease atmospheric greenhouse gas concentrations and emissions associated with human activity.

Although regulation of greenhouse gas emissions may still be a few years away given the current economic situation, some sort of government program that limits emissions on certain sectors and attaches costs (cap and trade) is likely sometime during the next few years. Regulations could put a "truer" price on the environmental consequences of fossil fuels, which has until now been an unmonetized negative externality, meaning these consequences have not been factored into the retail pump price of motor fuels. Such regulations may make biofuels more competitive, even during periods of low fossil fuel energy prices.

Most emissions accounting methods indicate that corn-based ethanol has a slightly lower carbon footprint than gasoline, and cellulosic ethanol will achieve a much greater reduction in greenhouse gas emissions. The U.S. Environmental Protection Agency is developing regulations to evaluate the carbon footprint of biofuels to ensure that they will indeed lower emissions associated with biofuel use.

Agriculture has the opportunity to participate in the production of feedstocks for biofuels, participate in programs that may provide carbon sequestration credit payments, engage in the production of renewable energy in other forms, and adopt practices that increase energy efficiency and reduce energy inputs. At the same time, agriculture will likely need to employ adaptive strategies to the impacts of climate change on cropping patterns, pest and disease control, and water availability and usage.

Renewable Energy Provides Long-Term Economic Benefits

Continued investment to expand renewable resources, including biofuels, can help the nation economically in the short and long term. In late 2006, the University of Tennessee Department of Agricultural Economics published a study estimating that achievement of 60 billion gallons of ethanol and 1.6 billion gallons of biodiesel per year by 2030 would impact the nation's economy by $350 billion and 2.4 million jobs, with much of these impacts occurring in the nation's rural economies. A study released this month by ProExporter Network and the University of Illinois at Chicago's Energy Resource Center found that a single 50 million gallon per year ethanol plant operating in Illinois produces 32 new fulltime jobs, spends $47 million annually on local goods and services and produces $1.2 million in new taxes.

Since 2005, more than $500 million has been invested in Oregon in the construction of two ethanol plants and one biodiesel facility, along with an oilseed crushing plant, and several other smaller operations around the state. This investment has created hundreds of jobs during construction, and well-paying jobs in the operation and maintenance of these facilities, along with other jobs and infrastructure development that support these new fuels.

We can't afford to repeat the mistakes of the 1970s

Every President in the past 60 years has promised to reduce US dependence on foreign oil. But there has never been a strategic policy or effort to do so. We can no longer afford to be a nation without energy security.

After energy prices returned to low levels in the late 1970s, interest in renewable energy waned. Repeating that mistake today would leave our consumers more vulnerable to future fuel price spikes, continue the current trajectory of atmospheric greenhouse gas concentrations, and ignore the huge economic development potential of the biofuels industry. We need to continue incentives for the biofuels industry, as well as investments in technological advancements in biofuel production. Diversification of our fuel sources, including biofuels, and adopting new technologies (hybrids, electric vehicles, etc), and transportation efficiencies (more barge and rail over truck) will help us adapt to future energy shortages and price spikes, address global warming, and provide a long-term source of jobs and income for millions of American workers.