Getting off the Fossil Fuel Roller Coaster

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The latter half of 2014 has brought some welcome economic news to consumers in the form of lower energy costs. The decline is especially noticeable at the gas pump, where the average U.S. price per gallon has dropped from $3.70 in early July to $2.78 in early December. At the same time, natural gas prices have remained relatively low. Spot prices have fluctuated between $3.50 - $4.50 / thousand cubic feet since March – following a temporary spike to nearly $8.00 in January and February.

Shifts in the prices of fossil fuels – especially oil and natural gas – are hardly new, and are part of the price roller coaster that we have ridden over the past forty years. Those fluctuations have been caused by imbalances in supply and demand.

When prices go down, the typical consumer reaction is to become more complacent, backing away from searching for alternatives to fossil fuels and becoming less supportive of conservation measures. Reviewing the historic fluctuations in fuel costs and the reasons for them underscores the reasons for remaining attentive to environmental concerns over burning fossil fuels and the inescapable fact that their supplies are limited.

Certainly, prices have risen over the past 20 years because of surging industrialization in countries like India and China. We are all too aware that prices increase when oil-producing counties experience political instability, or when they consciously decide to limit their production and exports.

Declines in energy prices are driven in part by a combination of worldwide economic recessions – as witnessed by low gasoline prices in 2009. Development of fossil fuels from new sources, such as the production of oil and natural gas from tar sands and deeply buried shale also depresses prices through increasing supplies.

Gasoline prices have declined over the past six months thanks to decreases in the price of crude oil. One index – Brent crude – has fallen from $110 per barrel in July to a current level of $70. According to many energy experts, the fall in crude oil prices is caused by a glut in the market created by a combination of factors. First, the extra 4 million barrels of crude we are coaxing from shale formations in North Dakota and Texas has driven up supplies. Second, reduced sociopolitical tensions in countries like Libya are allowing them to resume their oil production for world markets.

Since energy is so vital to our society, such fluctuations have a profound impact on our economic well-being. When prices rise, consumers generally suffer, while fossil-fuel producers benefit. We see increased pressure to adopt conservation measures like purchasing smaller cars, taking shorter trips, or using less energy in our homes and businesses. We also think more about switching to alternative forms of energy. When prices decline, consumers rejoice and producers suffer reduced profits. We often ease our conservation measures, and thoughts of switching to alternatives subside.

Historically, when energy prices decline, producing nations restrict their output to prop up prices. But in late November, Saudi Arabia dramatically decided to maintain high levels of oil production - over the objections of other producing nations like Venezuela and Iran. So the Saudis have resorted to an age-old strategy of reducing competition. They are allowing oil prices to drop to the point that – they hope - American oil companies will cease production because it is unprofitable. Experts question that strategy, however, because the break-even point for American production may well below the current $70 benchmark. For example, production in the Bakken of North Dakota remains profitable at $42 / barrel according to the International Energy Agency.

So it looks like oil prices will continue to drop, and most Americans will reap the economic rewards. And one can expect reduced calls for conservation and shifts to alternative energy.

Our euphoria over lower oil prices must be tempered by a sobering realization. We have seen this play out before – especially in 1999, 2005, and 2009 when low oil prices were followed by fairly dramatic increases in the ensuing two years. Nobody should be surprised if we see prices rise again at some point. The current glut can evaporate in the event of a natural catastrophe or upheaval in some energy-producing nation.

We should also realize that our continued dependence on fossil fuels contributes environmental damage – especially as greenhouse-gas emissions. So while consumers benefit from current reduction in energy prices, let's use some of the windfall to step up research into the further development of non-carbon alternatives, such as wind, solar, and even nuclear – to make them more cost-competitive. Much of that research should be aimed at making our transportation systems less reliant on fossil fuels – especially oil, where the price vagaries are most pronounced. Most importantly, we must continue to find ways to more efficiently use every megawatt, because many energy experts question whether non-carbon alternatives can shoulder current energy demands. By taking these steps now, we can help ensure a more diverse and secure energy future that will help get us off the fossil-fuel price roller coaster.