



Not Again

The Summer Vacation Gas Price Roller Coaster on the Move Again

Why Energy Price Volatility Hurts Families, Businesses, and the Economy

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Introduction and summary

Families across the country are now planning their summer vacations, eager for this weekend's Memorial Day kickoff of the spring and summer driving season to the beach, the mountains, fresh water lakes and streams, or any number of tourist sites in cities large and small. But on this coming three-day weekend, rising prices at the pump will be hard to miss. Like many past springs, prices for regular gasoline soared by almost 30 percent between the end of 2010 and May 16, 2011.¹

Unfortunately, there is no end in sight over the next several months. The Energy Information Administration at the U.S. Department of Energy projects that the average retail price of regular-grade gasoline will average \$3.86 per gallon during the holiday driving season—from April 1 to September 30—up \$1.10 from last summer, and increase almost 40 percent. And prices of futures and options contracts for gasoline—the way financial markets measure future expectations of major buyers and sellers of gasoline—predict there is a 33 percent chance that the national monthly average retail price for regular gasoline could exceed \$4.00 per gallon this July.²

High and rising prices mean that families will spend more on fueling up their cars to go to work just as more and more people are finding jobs again. And businesses will have to spend more on transporting goods, hurting consumers again with higher prices and pinching businesses, especially smaller ones, putting a damper on investments and hiring.

Rising gasoline prices are obviously a big problem, but it is not the only one that will haunt consumers and businesses this summer. The other problem is increasingly volatile gasoline prices. The upswing in gas prices this spring is reminiscent of several springs in the past. Prices at the pump also soared by more than 30 percent in the spring of 2002, the first year of such large price increases in the spring, and then again in 2004, 2006, 2007, 2008, and 2009—not even taking a break for the Great Recession.³ And then, in almost all cases, prices fell precipitously, occasionally even to their earlier levels, once the summer was over.

This year, it's looking like déjà vu all over again. The New York Mercantile Exchange, where many energy prices are determined, even halted trading of gasoline and crude oil futures on May 11, 2011, for the first time in more than two years, because of large downward price drops on futures that priced gasoline and crude oil several months, typically two to six months, forward.⁴

Now, falling gasoline prices after sharp run-ups at first glance may seem like a good thing, not a problem. After all, gasoline and other fossil fuels are the biggest energy item for households and play a major role for businesses. Other energy prices, particularly for natural gas, are also volatile, but not as much as gasoline and related fuel prices. The bottom line, though, is that families and businesses are exposed to massive price swings for the vast majority of their energy spending. These large price swings for gasoline and other energy prices make it even more difficult for families, businesses, and ultimately the economy to plan for the future.

Rising gasoline and energy prices should signal to families, businesses, and government policymakers that it is time to invest in energy efficiency and alternative energy sources. Higher gas and energy prices should lead to less demand and increased searches for alternatives. Yet the combination of high prices followed by increasing volatility quickly obscures these basic responses to higher prices.

This confusing energy price dynamic makes it difficult for families to budget expenses, estimate commuting costs, and make the informed economic decisions that will impact their households since families cannot really see where prices are heading amid the massive volatility. Many families consequently wait to buy a more fuel efficient car, or move closer to public transit, among other things, until they get a better sense of where prices are really headed. Businesses will similarly delay energy saving investments in more fuel efficient car and truck fleets, as will state-and-local governments and the federal government. And both consumers and businesses hold off on other energy-saving investments such as energy efficiency repairs or upgrades to homes, office buildings, and factories.

And now the cycle begins anew. What's more, families, businesses, and governments could be once again caught off-guard by rapidly rising prices at the pump next vacation season after watching prices fall in the autumn and winter, leaving our economy still heavily dependent on petroleum. In this paper we summarize past data on gasoline and energy price volatility, and consumer and business spending, and then make recommendations on how to avoid this very predictable and debilitating cycle in the future. We find that:

- **Consumers will delay purchasing a car after experiencing a period of high gasoline price volatility.** There is a 73.1 percent chance that consumers will spend a below-average share of their after-tax income on vehicles after they have just experienced a period of high gasoline price volatility. Consumer spending on cars is 4.3 percent below average in the year following a year-long bout of elevated price volatility.
- **Families spend less on home improvements and home purchases following a period of high energy price volatility.** Families' investment in residential structures, which includes new home purchases and upgrades to homes, is on average 0.5 percent of gross domestic product lower than is typical, following high volatility, or about \$75 billion in the current economy.
- **Businesses also reduce their investment spending after periods of high energy price volatility.** There is a 78.9 percent chance that business investment in transportation equipment as a share of GDP will decline after high energy price volatility. Businesses will buy 7.5 percent fewer vehicles than is typical, putting off purchases due to unstable and unpredictable prices.
- **The oil industry, in comparison, profits from periods of high volatility.** The so-called profit rate (profits to assets) of the oil industry is significantly higher during times of high energy price volatility, likely because the price spikes underlying increased volatility result in higher retail prices and more consumer spending, without an equal offsetting effect when prices go down again.

In this paper we examine the relationship between various categories of consumer and business spending patterns and energy price volatility. We also propose ways that policymakers can address the impact of extreme price volatility on the economy, among them an array of ways to diversify our sources of energy so that gasoline prices and the prices for other forms of energy become less volatile, more predictable, and over time less expensive.

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