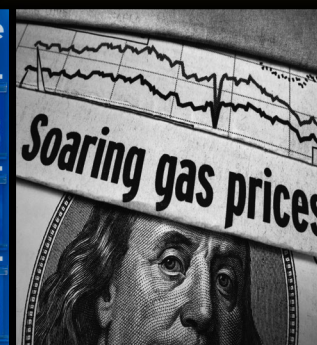


Over A Barrel

How The Coming Oil Crisis Will
Destroy Life in America As We Know It



Gasoline		Self Serve
Regular	509	$\frac{9}{10}$
Plus	517	$\frac{9}{10}$
Supreme	525	$\frac{9}{10}$



By Bill Heid & Brian Brawdy

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Part 1:

Gas Prices On The Rise

Speculation? Or Just Economics 101?

There it goes again. The roller coaster of gasoline prices is climbing up and up, and just in time for the summer driving season. The reason? Evil price-manipulating speculators who are hoarding oil? Some in Congress and the administration would have you believe that. The government itself, however, says that normal market pressures are to blame. In an April 20, 2011, letter to Senator Maria Cantwell, the Federal Trade Commission—the government agency charged with enforcing fair trading practices—said that the current rise in the price of gasoline is mainly a result of “changing global crude oil prices.”¹

But many remain unconvinced and still believe that somehow, somewhere, someone is illegally profiting from the spike and gouging American consumers in the process. One of those disbelievers, evidently, is President Obama. Despite the FTC’s findings, he has directed a new federal bureaucracy, the Financial Fraud Enforcement Working Group, to look into the matter.² But undoubtedly, if this group is allowed to pursue their work in a serious, non-political way, they will agree with the FTC’s conclusions.

The last time that gasoline saw such a rise was in 2008. And people said then what they are saying now: The increase is due to oil speculators who are buying up large amounts of oil and hoarding it to artificially drive up the price. But back then, the government, this time under the guise of the Commodity Futures Trading Commission, concluded that the increase in the price of oil was due to the same old pressures you learned in Econ 101: “fundamental supply and demand factors.”³

Getting the Most Out of Your Gas Dollar

- ☑ In order to make sure your car is running at peak efficiency, here are some helpful tips:
- ☑ Ensure your tires are inflated to their proper pressure.
- ☑ Remove excess weight from your car.
- ☑ Use the cruise control, especially on long trips.
- ☑ Slow Down! Drive the speed limit.

Fill up your tank in the morning when the gas is cooler and therefore denser.

The Almighty Dollar No More

What sets this current rise apart from previous market rises and falls is that we are now experiencing the most devalued dollar we have seen in a long time. In 2011, the dollar completed one of the worst three-year slides in history. Since oil, along with most commodities, is traded globally in dollars, the less valuable the dollar is, the less oil it will buy. Oil producing countries raise the price of oil so that they can offset the weaker dollar, and sustain profits in their own currencies.⁴ Former Federal Reserve official Gerald P. O'Driscoll puts it simply: "It is the old story of too much money chasing too few goods."⁵

We Are At The World's Mercy

In addition to these traditional market forces in the United States, global events also shape how much we pay at the pump here at home. According to the U.S. Department of Energy, the U.S. imports approximately 51% of its oil from overseas.⁶ In March of 2011, the Organization of Petroleum Exporting Countries, or OPEC, a cartel-style bloc of state-run oil producers, slashed oil production by 800,000 barrels a day.⁷ In addition to this calculated move, the so-called "Arab Spring" which saw massive civil unrest in oil-producing countries across the Middle East in 2011, disrupted oil production and shipping. In Libya alone, oil output tumbled from an average of 1.6 million barrels a day in 2010 to less than 300,000 per day in the first months of 2011.⁸

Other crucial factors may be at work that will also affect the world oil supply. Some scientists fear that we may be tapping out the earth's overall oil supply. This concept is called the "Peak Oil" theory. Those that support this idea point to the perplexing decrease in oil production by Saudi Arabia as one of the first signs that we are exhausting the planet's oil. Traditionally, Saudi Arabia has increased production to meet world demand, but it has stopped doing so in the past few years. As of spring 2011, Saudi Arabia has been producing the same amount of oil that it did in 2005. With little or no explanation being provided by the Saudis, people are left to wonder if this is a strategic or economic decision by the government ... or if Saudi Arabia is simply unable to produce any more oil. Economist and oil expert James Hamilton believes it is the latter, stating recently in an interview, "Their main field, the world's largest producing field, has been in production since 1951. Sooner or later, that's going to decline. A lot of people think it's now."⁹

Floods, Fire, and Fuel

Events in the United States are also affecting oil and gas prices. There has been a drop in the domestic supply production of crude oil as well as issues affecting our ability to turn that raw oil into gasoline we can burn in our cars.

The U.S. Energy Information Agency has forecast that domestic crude oil production will drop by 20,000 barrels per day in 2011.

In addition, they predicted that Gulf of Mexico production will drop an alarming 130,000 barrels per day due to the closing of Gulf oil fields and the 2010 drilling moratorium instituted by the U.S. government after the Deepwater Horizon oil platform disaster. Alaskan production will also drop in 2011 by 80,000 barrels per day. And the projections look even worse for 2012.¹⁰

Not only is supply decreasing, but the U.S. capacity to refine oil into gasoline has been hit by a series of mishaps, including fires and power outages that caused a large number of U.S. refineries to halt production temporarily. Refineries are bracing now for a potential disaster, as the Mississippi River is flooding at record levels. Valero Energy Corporation is securing equipment and moving goods to higher ground at its facilities along the Mississippi. Exxon is lining its refinery in Baton Rouge, Louisiana, with sandbags, and Royal Dutch Shell is preparing to evacuate its refined products by truck and train should the flood waters reach too high.¹¹

Another seasonal factor in the price of gasoline is that in the spring, refiners switch to the less polluting “summer blend” gasolines. A series of federal and state laws and industry regulations require refiners to change the blend of their gasoline to remove certain hydrocarbons that evaporate more rapidly in warmer weather. These hydrocarbons can turn into ozone and smog in the summer heat. The summer blends are slightly more expensive than the winter gas, but the transition to the summer blend can sometimes create an artificial shortage, and therefore higher gas prices, as producers try to sell off their winter fuel before the summer blends arrive. Sometimes they sell off too much, creating a temporary shortage and therefore a quick spike in prices.¹²

Price Pressures and Demand

Americans are reacting to the increases at the gas pumps by, predictably enough, using less gas. Through March and April of 2011, American consumption of gasoline saw a steady, if slight, decline. However, during the first week of May, gasoline demand dropped a near-record 2.4%. This reduction in demand and consumption caused gasoline futures to drop 8% on May 11, 2011. Trading on the New York Mercantile Exchange was halted for 5 minutes to stop the slide.



The American Automobile Association is fielding more calls than ever before from motorists who are stranded by the road, out of gas.

Oil analyst Andrew Lipow said that Americans seem to start “cutting back” when gas hit \$3.50 per gallon, and that if the price continues to rise, the reduction in demand will continue.¹³

However, America is a car culture, and Americans depend on their automobiles to sustain their way of life. Americans drive 3 trillion miles a year. They use 178 million gallons of gas per day, mostly getting to and from work and school.¹⁴ Many people have few ways to reduce gasoline consumption; they must show up for work and school every day. This is proving to be a painful adjustment for many. The American Automobile Association (AAA) estimates that assistance calls for drivers who have run out of gas while driving rose 5% between 2010 and 2011. This amounts to roughly 600,000 drivers who need some help just to get to the next gas station. Gasbuddy.com, a website that allows consumers to find the cheapest gas in their area, saw a 150% increase in usage since between spring of 2010 and spring of 2011 as Americans spent more time and energy to save a few dollars when filling up the gas tank.¹⁵

A few Americans are cutting down on actually paying for gas, but are continuing to use it – or rather, use somebody else’s. “Drive-offs,” in which a driver fills up his car at a gas station and then leaves without paying, are on the rise nationwide. Other kinds of gas theft beyond the traditional “gas and dash” are also increasing as well. One of the most common types of gas theft takes place in residential neighborhoods and involves thieves drilling holes in gas tanks and draining the gasoline right out of parked cars.¹⁶ However, in some areas, thieves are turning to more wholesale theft, using specially modified flatbed trucks that are essentially rolling gas tanks to steal gas in larger quantities. One station in California had 528 gallons stolen, which was worth \$2,300. The thieves in this case are suspected to have hit several gas stations around the Golden State.¹⁷

Yet, despite cutbacks by American drivers, the U.S. reductions are slight when compared to global usage. The world consumes two quarts of oil per day, per person.¹⁸ Across the globe, oil consumption is projected to increase by 1.4 million barrels per day in 2011, and another 1.6 million in 2012. This will force an increase in production and a drawdown of oil reserves to meet the crushing new demand.¹⁹

The main driver of the global demand is China. China is the world’s largest oil consumer. Its demand for oil is up over 7% from 2010, and this number is projected to grow. Many experts predicted that the high price of oil would lower demand, as it has in the United States. However, China has defied this prediction, largely because it has strict price controls over domestic gas prices. Chinese gasoline consumers are not feeling the pinch at the pump as drivers in other parts of the world are. In April 2011, China experienced its third highest consumption rate in the history of the country.²⁰ And this trend will likely continue as China’s economy continues to grow.

Currently, there is roughly one car for every 14 people in China. This doesn't touch the U.S. ratio of 1:1, or one car for every person, but China is rapidly closing the gap. The number of personal automobiles in China increased by an incredible 19% last year as an additional 17 million cars traveled China's congested roads.²¹

The world's second fastest growing economy, India, is experiencing a similar increase in demand for gasoline. The Indian government, like China, strictly controls gasoline prices. The result is that India is increasing its consumption while the government-controlled gasoline prices are causing the Indian refineries to take it on the chin as the oil they buy is more expensive, but the gasoline they sell is not. Some estimate that Indian refineries are losing up to \$112 million a day in the transaction. Coupled with a decrease in supply of their usual Libyan light sweet crude, they are desperately searching for new sources of the black gold at higher prices.²²

What Goes Up Won't Cme Down

The worldwide increases in demand and a tightening of supply point to gas prices heading in one direction: up. But when it comes to high gas prices in the United States, drivers in most of the rest of the world just shake their heads and say, "Welcome to the club." Drivers in Norway have been paying over \$9 per gallon for quite

"In England, Ireland, Germany, Italy, and France, people pay between \$7.50 and \$9.00 a gallon."

a long time. Likewise in England, Ireland, Germany, Italy, and France, people pay between \$7.50 and \$9.00 a gallon. However, the dramatically high prices in these countries is due mainly to their tax structures, and the fact that most European governments see gas taxes as a way to both raise revenue and to discourage driving for environmental reasons. For example, in Denmark, drivers pay just shy of \$10 for a gallon of gas, but of that price, \$5.40 is taxes and fees. So the taxes are more than the actual cost of the product!²³

The only countries selling cheap gas these days are those that have chosen to subsidize gas prices to keep them artificially low. This, in turn, helps to keep their people happy. India and China follow this practice, as well as most of the OPEC member states. In 2008, the last time gasoline hit \$4 a gallon in the United States, drivers were enjoying gas for less than a dollar a gallon in Saudi Arabia, Egypt, and Nigeria, and an astonishing 12 cents a gallon in Venezuela.²⁴

Awash in Greenbacks . . . But Not for Long

Yet another factor contributing to skyrocketing U.S. gas prices is the world's reaction to the pervasive weakness of the U.S. dollar, along with perceived recklessness in U.S. monetary policy.

Indeed, most countries have traditionally kept vast supplies of dollars as a backup, stabilizing force to protect against fluctuations in their own currencies. But this may not continue into the future. As countries are seeing their investment in dollars shrinking at an alarming rate as the value of the dollar drops, they are increasingly shedding their supply of dollars, and moving into other currencies such as the Euro or even gold. Countries around the world dumped roughly \$9 billion in the first quarter of 2011.²⁵ Currently the dollar still makes up 60% of the world's cash reserves. The next most common reserve currency is the Euro, making up roughly 26%.²⁶

In February, the International Monetary Fund issued a report that concluded that the U.S. dollar should be replaced as the world reserve currency by a unit called Special Drawing Rights, or SDRs. SDRs were created in 1969 and used by the IMF when making loans to countries. While not an actual currency, SDRs are certificates that allow a borrower to withdraw whatever unit of currency they require at an exchange rate set by a group of predefined currencies that are more stable than any single currency, including the dollar. In other words, the IMF argues, SDRs are a more stable reflection of the global economy than the dollar, which is subject to domestic pressures and policies within the United States. The IMF also argues that SDR-denominated bonds could be offered to countries to serve as their reserve currencies, and that they could be used in commodity trading, therefore further insulating the price of oil from the weakness of the dollar.²⁷

But as with all things in the global marketplace, the vast and growing economy of China has the potential to change the game. The Chinese yuan, which is currently not convertible to other currencies, has yet to make a move into the global financial scene. But when it does, the impact will likely be huge. Making the yuan convertible into other currencies would unlock the private savings in China, currently 75.6 trillion yuan (roughly \$11.6 trillion or 80% of the U.S. gross domestic product) to overseas investments. The Chinese government is making moves to internationalize their currency. They have recently set up an offshore market for yuan trading in Hong Kong and have made currency swaps with several countries. Even the all-American restaurant McDonald's is getting yuan fever, issuing yuan-denominated bonds in Hong Kong in 2010.²⁸

A Bloomberg poll among financial analysts, economists, and traders showed that a majority believed that the yuan would be fully convertible in five years, and made a reserve currency in 10 years.²⁹ World leaders are starting to support the yuan effort as well. At a meeting of the G-20 conference of finance ministers and chief bankers in Nanjing, China, in March 2011, French president Nicholas Sarkozy declared that it was high time that the yuan, or the “redback,” became a world reserve currency.³⁰

“Americans could experience a 25% drop in their standard of living.”

So what if the dollar were no longer the world reserve currency? How would this global economic situation affect everyday Americans? Real estate billionaire Sam Zell says that it would be calamitous. He believes that Americans could experience a 25% drop in their standard of living. The cost of everything from gasoline to garbanzo beans would become suddenly and drastically more expensive, practically overnight.³¹

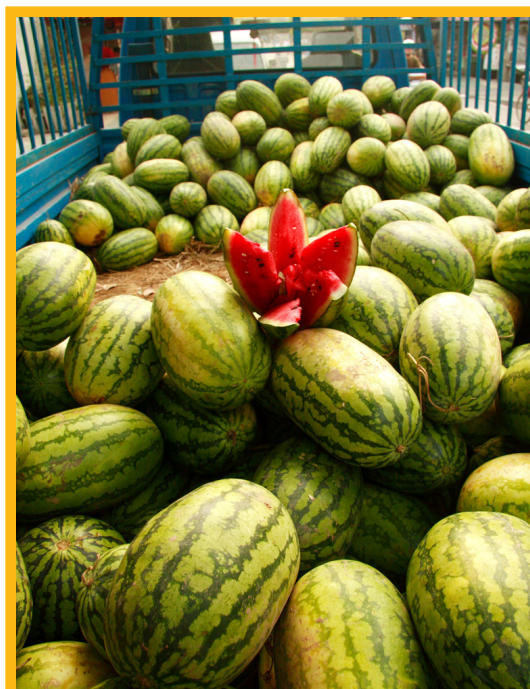
Part 2: The Domino Effect

Putting The Brakes On The Economy

Even if the dollar remains the dominant world reserve currency, the weakness of the American currency and the stubbornly high price of gasoline are going to have effects far beyond those felt at the gas pump. As a general rule, the growth in the national economy slows 0.2% to 0.3% with every \$10 rise in the price of oil per barrel. The price of oil and therefore of gasoline affects every sector of the economy and puts a strain on American pocketbooks in myriad ways.

Food: A Double Whammy

The price of food will be hit particularly hard, suffering a rise in prices for multiple reasons. Farms consume a tremendous amount of oil just to produce their crops. One Ohio commercial harvesting company that services farms all over the Midwest and upper South has five harvesting machines that consume roughly 100,000 gallons of fuel, both diesel and gasoline, per year. The company is projecting a fuel bill of roughly a half-million dollars in 2011. The company expects that in the future, the cost of fuel will likely exceed the yearly cost of machinery.³² And harvesting is just one of the fuel-guzzling steps required to grow food. The fuel costs for planting, weed control, and processing are also skyrocketing. These costs get passed along to the consumers and wind up being reflected in the price of produce sitting on grocery store shelves.



The American Automobile Association is fielding more calls than ever before from motorists who are stranded by the road, out of gas.

For 2011, the U.S. Department of Agriculture predicted a rise in food costs of 3-5%. But they arrived at this estimate without taking into consideration one major area of potential price increase: transportation.³³ The majority of food on American grocery store shelves does not come from local farmers.

It is shipped in by train, truck, plane, and boat from producers all across the country and all over the world. On average, in the United States, food travels 1,500 miles before it is eaten.³⁴ For one company, the cost of transporting a truckload of watermelons from Florida to Ohio has risen from roughly \$2,500 in 2010, to \$4,000 in 2011.³⁵ All of that moving of goods from point A to point B requires vast amounts of fuel. And the cost of that rise in fuel is passed, as with all things, directly on to the consumer.

No More Free Delivey

The increased fuel costs associated with transportation are not limited only to food. Many businesses that deliver goods and services have been forced to add fuel surcharges to their invoices. Businesses as diverse as pizza shops, dry cleaners, flower shops, and party supply stores are all feeling the extra costs of delivering their goods to customers.³⁶ But there is virtually no business in existence that isn't feeling the pinch of increased costs of either transporting goods themselves, or having raw materials shipped to them, and you and I pay the price for that.



Many businesses that once offered free delivery are now tacking on delivery fees.

No More “Fun Money”

We have seen that Americans are uniquely dependent on their cars to get to work and school. So during times of expensive gas, we may eliminate extra trips, but the normal work-a-day driving must continue. So as more and more money goes into our gas tanks, there is less money to go around for everything else. The ripple effect of higher gas prices is felt in all sectors of the U.S. economy. Economist Ryan Sweet of Moody's Economist.com says that “[s]helling out more money at the pump makes you reassess spending and leads to cuts elsewhere. Consumers will go out to the movies less, cut back on dinners out—you’ll definitely see a shift in sentiment.”³⁷ Just open any newspaper and you will read about consumers cutting back on discretionary spending. Everything from vacations and dining out to coffee and even clothes are suddenly considered luxuries that many can no longer afford.³⁸ Some economists estimate that for every one cent rise in the price of gasoline, spending will decline in other sectors of the economy by \$1 billion. While not all experts agree with this figure, it is clear that high gas prices are a drag on the entire economy.³⁹

Part 3: Busting The Oil Drum

Can We Just Grow Our Way Out Of It?

The U.S. Government has put a priority mandate for the production of ethanol as an alternative to oil imports. Ethanol is a fuel made from processing certain crops; mainly corn, but also soybeans and sugarcane. In the Energy Acts of 2005 and 2007, the U.S. Congress mandated that American fuel companies incorporate ethanol into their gasoline blends.⁴⁰

While ethanol does produce a slightly cleaner burning fuel, it is certainly not a solution to the U.S. dependency on foreign oil. One ecologist who has studied ethanol production, Professor David Pimentel of Cornell University, says that accounting for farmer's use of traditional fossil fuels to plant, grow, and harvest the corn, and the refiners use of fuel to turn that corn into ethanol, it actually takes 1.29 gallons of oil-based fuel to make 1 gallon of ethanol. In addition, the energy content of gasoline is much greater than that of ethanol. A gallon of gasoline contains 125,000 BTUs of energy, while a gallon of ethanol contains merely 84,400 BTUs.⁴¹ Since ethanol only produces 65% of the energy that gasoline does, this seems like a very poor use of resources⁴²

"It takes 1.29 gallons of oil-based fuel to make 1 gallon of ethanol."

In addition to its relatively poor energy return, ethanol is a limited resource. Even though it is sustainable, and new corn can be grown every year, it does not produce enough energy to take over as a replacement for gasoline. If all of the corn grown in the United States were devoted to ethanol production, it would only supply 9% of the energy needs currently being supplied by oil and gasoline.⁴³ So ethanol will never be much more than a way to produce slightly cleaner exhaust and to provide job security for corn farmers.



If all of the corn grown in the U.S. were devoted to ethanol production, it would only supply 9% of the energy needs currently being supplied by oil.

In addition to ethanol's many shortcomings, using corn for fuel is literally taking food out of the mouths of people. In the first part of 2011, the world experienced some of the worst food shortages in history. And as supplies dwindle, the cost is going up. The United Nations Food and Agriculture Organization reported that its food price index jumped up an unsustainable 32% in the second half of 2010.⁴⁴

The World Bank estimates that 44 million people were driven into extreme poverty in just the latter half of 2010 due solely to increases in the cost of wheat, corn, and oil.⁴⁵ It takes 26 pounds of corn to make one gallon of ethanol.⁴⁶ The USDA estimated that 25% of the U.S. corn production in 2011 will be used for ethanol production. That equals 3.87 billion bushels of corn to be used as fuel.⁴⁷ The amount of corn used to fill up the tank of an average SUV just once would feed a person for a year. At current world consumption rates, the amount of corn used for ethanol is enough to feed 300 million people for a year.⁴⁸

So If Corn Isn't The Answer, What Is?

If there isn't enough corn grown on the planet to produce enough fuel to power America's cars, then what is the answer? Hydrogen fuel cells? Hybrid cars? Electric cars? All show promise, but in spite of almost 40 years of calls to end our dependence on foreign oil, and several false starts, they are only now making timid inroads into the market.

In the mid-1990s, General Motors developed the first modern marketable electric car, the EV1. These cars were leased to consumers in California and were gaining a popular following. When California saw that car companies could produce a viable electric car, the state created regulations that required manufacturers to offer zero-emissions cars to customers in the state. The California government installed solar-powered electric refueling stations to allow electric car drivers to charge their cars at home and also at public areas. However, several auto manufacturers, joined by the Federal government, sued the State of California to overturn the law. In 2003, the California Air Resources Board dramatically scaled back the zero-emission regulation. Following this ruling, when the EV1 leases expired, GM refused to renew them and repossessed all of the cars that were in the hands of consumers and, despite vocal protests from electric car devotees, crushed and disposed of the vehicles. Other car manufacturers, such as Honda, Toyota, Ford, and Chrysler followed suit, until virtually no electric vehicles remained on the road in the state.^{49, 50}

The 2006 documentary, *Who Killed the Electric Car*, explored the demise of the EV1. The filmmakers examined why production of the cars was ended and who was to blame. The film concludes that it was a combination of pressure and activism from oil companies and the auto industry, along with a disinterested consumer base that was turned off by the relatively limited range and high price. Additionally, the federal government began putting large sums of money into research for hydrogen fuel cell vehicles in the early part of the 21st century.⁵¹

Since the demise of the EV1, and with the recent spike in gas prices, electric cars are hitting the market again—although in small numbers—with models such as the Nissan Leaf and the Chevrolet Volt.

But many experts and advocates believe that the logical next step will build on the popular combination gasoline/electric hybrid vehicles such as the Toyota Prius and the Honda Insight. Combining these platform with a plug-in feature that allows the hybrid vehicles to travel up to 100 miles before ever calling upon its gasoline engine would greatly increase the efficiency of these vehicles, and further reduce gasoline consumption. Even former CIA director James Woolsey has become a champion of this concept, emphasizing that it is an important strategy to reduce America's dangerous dependence on Middle Eastern oil.⁵² Woolsey stated, "[w]e can, we should, and we must, as a major national priority—absolutely, totally, completely destroy oil's monopoly."⁵³

"We can, we should, and we must, as a major national priority—absolutely, totally, completely destroy oil's monopoly."

- Former CIA Director James Woolsey

But it is precisely that Middle Eastern oil, and the moneyed interests behind it, that may—once again—destroy the electric, or even electric hybrid, car. The OPEC nations can leverage their stranglehold on the world's oil supply to undermine and even kill the electric car movement. In a world where gasoline is at \$7 a gallon, electric cars, even with their limitations, are a lot more attractive to consumers than when gas is \$1.50 a gallon. Many skeptics think that OPEC deliberately dropped the price of oil as the EV1 was gaining popularity in order to reinforce America's oil culture. Just as a dealer gives away free drugs to a junkie in order to keep him addicted, OPEC gave away cheap oil to keep American drivers hooked.⁵⁴

The International Efforts

"How do you run an entire country without oil?" That was the question asked by Shai Agassi of California-based Project Better Place. This group has raised \$200 million in venture capital from large companies such as Morgan Stanley, VantagePoint, Wolfensohn and Company, and the oil-refining Israel Corporation. In partnership with Renault-Nissan, they plan to work with the governments of Denmark and Israel to build national electric infrastructures to support a mass influx of electric cars.

They will allow consumers to purchase electric cars, but not on a traditional model. Instead, they will sell them much like cell phones are sold today. Consumers will purchase a usage plan and get the car for free.



In Denmark and Israel, the government is considering giving electric cars away for free – and selling consumers usage plans, much like cell phones are sold today.

In Israel, the infrastructure investment of an enhanced power grid, charging stations, and battery exchange facilities will cost about \$5 billion, or about half of what Israel pays annually for oil.⁵⁵

“I Don’t Want To Drive A Golf Cart”

One of the psychological barriers that many drivers had about electric cars was a belief that electric cars were little more than severely underpowered toys. The successful performance of the EV1, which had speed to spare, and other electric production models such as the Toyota RAV-4 Electric Vehicle, and now the high-end Tesla speedster, has put this fear to rest. The problem that endures with the cars is their limited range. At best, electric cars can only get roughly 100 miles out of a fully charged battery, and it can take from 4 to 8 hours to recharge. Rosanna Garcia, a marketing professor at Northeastern University in Boston, has dubbed this problem “range anxiety.” She points out that, although the average person does not usually drive more than 40 miles a day, getting stranded without any electric juice is consumers’ number one concern with electric cars.⁵⁶

The problem is similar to issues faced by new gasoline automobile owners in the early part of the 20th century. There were not enough gas stations around to keep the cars on the road. As late as 1927, AAA was publishing gas station locations in its tourbooks so that drivers would know how much extra gas they needed to carry with them to make it to the next station.⁵⁷ For today’s modern electric car owners, few though they may be, a similar problem exists. Without a sizeable infrastructure investment to put recharging stations within easy reach, consumers’ anxiety will continue.

Keeping The Lights On And Cars Fueled

However, the problem goes beyond the location of stations. A very real problem exists in providing those stations with an adequate supply of electricity. Most of the forays into electric cars have been in California, a state that already suffers from electricity supply problems. Without a substantial investment to upgrade the national power grid, many people think electric cars would create a new kind of energy crisis.⁵⁸



Without a substantial investment to upgrade the national power grid, many people think electric cars would create a new kind of energy crisis.

Increasing the electric supply in the United States brings a whole other set of issues. Environmentalist critics of electric cars point out that these vehicles do not really produce zero emissions. Most of the electricity in the United States is produced by the dirty environmental offender coal. There is much debate over whether or not we would be substituting gasoline-generated pollution for coal-generated pollution if all of the cars in the United States ran off of electricity. To solve this issue, the United States would need to invest in electricity producing plants that are not coal-dependent.⁵⁹

New Solutions For Cities

Cities and towns in other countries are exploring new ways to get around the car problem. Some, such as Vauban, Germany, are tackling the problem by getting rid of cars altogether. Vauban, a purpose-built city designed to be a living experiment, discourages car ownership by making it easier to navigate around town by bicycle than by car. Only about 20% of the residents own their own car. The houses are built closer together and are all carbon-neutral, and most of them are equipped with solar panels that allow them to power their homes and sell excess electricity back to the national grid. Many people doubt that these solutions are applicable to the United States, but teams of scientists and academics from around the world are studying this city and determining what applications can be brought to their own countries, including the United States.⁶⁰

Didn't Hydrogen Destroy The Hindenburg?

The problems with the national electric infrastructure and availability of recharging stations are solvable, but it would require a national effort. The Federal government could provide the leadership needed, but it has decided to put its efforts and resources not into electric cars, but into hydrogen fuel cell cars. In 2003, the Federal government allocated \$1.2 billion to research ways to make hydrogen fuel cell cars a viable alternative to traditional gasoline powered cars. Critics argue that electric powered cars are a much more promising solution that could deliver a marketable alternative to gasoline in a much shorter period of time than hydrogen. Most experts agree that viable mass-produced hydrogen fuel cell cars are more than a decade away, and that this move is a way to kill off the electric car initiative and direct more money to fossil fuel suppliers. They even point out that the plan includes \$19.6 million to study how to generate hydrogen from the very commodity it is seeking to replace—gasoline. One critic claimed that this approach was like “trying to lose weight by running to McDonalds.”⁶¹

Don't We Have Our Own Oil?

If the ultimate goal is to end our dependence on foreign oil, shouldn't we be expanding our own internal oil supply? This would seem to be a logical step, but the government is dragging its feet. The explosion and subsequent massive oil leak at the Deepwater Horizon oil platform in 2010 led to a six-month moratorium on new drilling in the Gulf. However, it was more than a year later before President Obama announced that he was directing the government to conduct new lease sales in Alaska, and to renew existing leases in the Gulf of Mexico. In addition, the Department of Interior is exploring new oil and gas sources in the middle and south Atlantic and said it is planning new drilling lease sales in the Gulf. However, these new initiatives by President Obama only took place after the U.S. House of Representatives passed three bills aimed at forcing the Administration to take action to promote domestic oil production. In response to the President's actions, Congressman Doc Hastings, the Chairman of the House Natural Resources Committee, said that "the President is finally admitting...that increasing the supply of American energy will help lower prices and create jobs."⁶²

Despite the President's remarks, the Bureau of Ocean Energy Management, Regulation, and Enforcement, the government office that oversees offshore drilling, has not scheduled any lease sales for 2011.⁶³

The President noted on May 11, 2011, that domestic oil production in the United States in 2010, just over 2 billion barrels, was at its highest level since 2003. While this is true, it doesn't tell the whole story. The government's Energy Information Administration projected that, despite the President's new efforts, domestic oil production will drop by 110,000 barrels per day in 2011, and by an additional 130,000 barrels per day in 2012. This drop will be due mainly to a decline in oil production in Alaska and the Gulf of Mexico due to "maturing" oil fields that are running dry.⁶⁴

SPR To The Rescue... Or Not

In the President's speech, he did leave open the possibility of tapping into the nation's Strategic Petroleum Reserve (SPR). But many critics agree that this would be a terrible decision. The SPR is a national store of oil that was created to be used only in the event of a national oil supply emergency. As of November 2010, the SPR held over 726 million barrels of oil, the highest amount ever held there.⁶⁵ At the current consumption rate of 18.8 million barrels of oil per day, the SPR could supply the U.S. with oil for just over 38 days.⁶⁶

Many people have called upon the government to release oil from the SPR in order to bring the price of gasoline down. This is not the reason that the SPR was created, but that does not deter some. In May 2011, Congressman Ed Markey (D-MA) introduced a bill in Congress to require the Department of Energy to draw down the SPR by 40 million barrels, or roughly 4% of the SPR's total holdings, so that the new oil entering the market would lower gas prices. Oil economist Timothy Considine examined what happened to oil markets and the price of gasoline the last time there was a large release of oil from the SPR. In 2000, the SPR released 30 million barrels of oil. In response, Saudi Arabia cut production to keep prices high. In the end, it only brought the price of oil, and the corresponding price of gasoline, down about 3.5%.⁶⁷

The SPR was simply not designed to be a gasoline price-adjustment lever. Its purpose, rather, is to help insulate the United States from a true oil supply emergency. And the SPR may be called upon to do just that. As we went to press, the widespread political and civil unrest in the Middle East had not yet spread to Saudi Arabia, but the warning signs were there. If the Saudis were faced with a crisis such as those going on in Egypt and Libya, we could be faced with a serious oil supply emergency and we will need the SPR to help insulate us.⁶⁸

Why Not Just Put A Price Cap On Gas?

The government could put a limit on the price of gasoline at what it thinks is a reasonable level, and indeed it has done so before. In 1979, the government limited the price of gasoline to \$1.00 per gallon. The result? An increase in demand, long lines at the pump, gasoline shortages, rationing, and a burgeoning black market. Keeping the price at a below market price invariably increases demand. That in turn leads to severe supply shortages. When the market price rises above that of the cap, somebody must pay the difference. Either the already deeply in debt government, or the refineries, will be taking a major financial hit.⁶⁹ Just look at China and India today, and you will see how unsustainable this model is.



When gas prices are capped by law, spiking demand leads to severe supply shortages.

Part 4:

Saving Gas In A Car-Driven Culture

Leave the Car At Home

If you are like most Americans, you are very dependent on your car. So we will all need to make changes in several areas of our lives in order to counter the higher gas prices and the higher commodity prices that come along for the ride.

You should investigate what public transportation options are available to you for your commute to work. The American Public Transportation Association estimates, based on the price of gasoline, the cost of parking, and the average cost of public transport, Americans could save an average of \$825 a month, or a whopping \$9,904 per year if they utilized this option more often. Even if your schedule doesn't let you take the bus every day, using it as little as once or twice per week can go a long way towards blunting the bite of higher gas prices.

If there is no public transportation near you, investigate carpooling, or, if you live close enough, bicycling to work. Many cities have seen big gains in bicycle commuters in the past decade. In Atlanta, Baltimore, and Pittsburgh, for example, three times as many people are biking to work as did in 2000.⁷⁰ U.S. Transportation Secretary Ray LaHood is a big champion of bicycle commuting. He is calling for an interstate biking system, an idea that parallels Eisenhower's development of the interstate highway system.⁷¹



Cities across the nation have seen large increases in the number of commuter cyclists in recent years.

Many cities provide carpool matching services as well as information about public transportation. Some, such as Houston's Commute Solutions program, even offer telecommuting support information.⁷²

The organization NuRide provides incentives for commuters in several cities who take more efficient means of transportation, including public transit, carpooling, bicycling, or walking. Participants get points for each trip they take, and can use them for gifts from local businesses such as free meals at restaurants, theater tickets, and gift certificates.⁷³

Telecommuting is a growing trend that lets you keep your car parked in the driveway while allowing you to still get your work done. International Data Corp predicts that by 2012, up to 70% of the U.S. workforce will be “mobile” – able to work away from the office.⁷⁴ This may be overly optimistic, however. The hardest part is often convincing employers. The federal government, which should be leading the way on telecommuting, has disappointed on this issue. In 2010, fewer than 6% of all federal workers telecommuted even one day per month.⁷⁵ And yet, according to the most recent Federal Employee Viewpoint Survey put out by the Office of Personnel Management, 64% could telecommute at least part of the time if their managers would put protocols in place to do so.⁷⁶

Combating The Domino Effect

As gas makes all goods more expensive, people are cutting back wherever they can.

One popular trend is the “staycation,” where people take vacation time from work, but don’t travel to other locations as they might have in the past. Many families take the vacation time to explore local attractions. They save not only on airfare or gas, but also avoid the pricey hotel and restaurant bills that accompany more typical travel vacations.

As food prices continue to escalate, more Americans are turning to home gardening. The average American eats just under 2,000 pounds of food per year.⁷⁷ Even a relatively small garden of 600 square feet produces on average one pound of fresh produce per square foot, or 600 pounds during the growing season.⁷⁸ That represents 30% of your total food intake for a year.

Since there are few viable electric cars on the market, and the price of gasoline looks to continue its upward trajectory, the immediate solutions are to chip away at energy usage and increasing costs in many areas of our lives. Growing our own food, leaving our cars parked in the driveway as often as we can, and even looking at making energy-saving improvements to our homes can all add up to big savings until some large-scale national solutions are developed.

How much is your garden plot worth?

One average gardener in Maine decided to spend part of his summer calculating the value of the produce he grew in his family food garden. With an investment of roughly \$240 in seeds, supplies, and compost, and growing an average assortment of vegetables and fruits, and in a relatively modest sized plot of land, his garden produced roughly \$2,400 worth of food in one season. This intrepid gardener produced this value in a garden that was approximately 1/25th of an acre, so he calculated that a one-acre home garden could generate roughly \$60,000 a year.

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