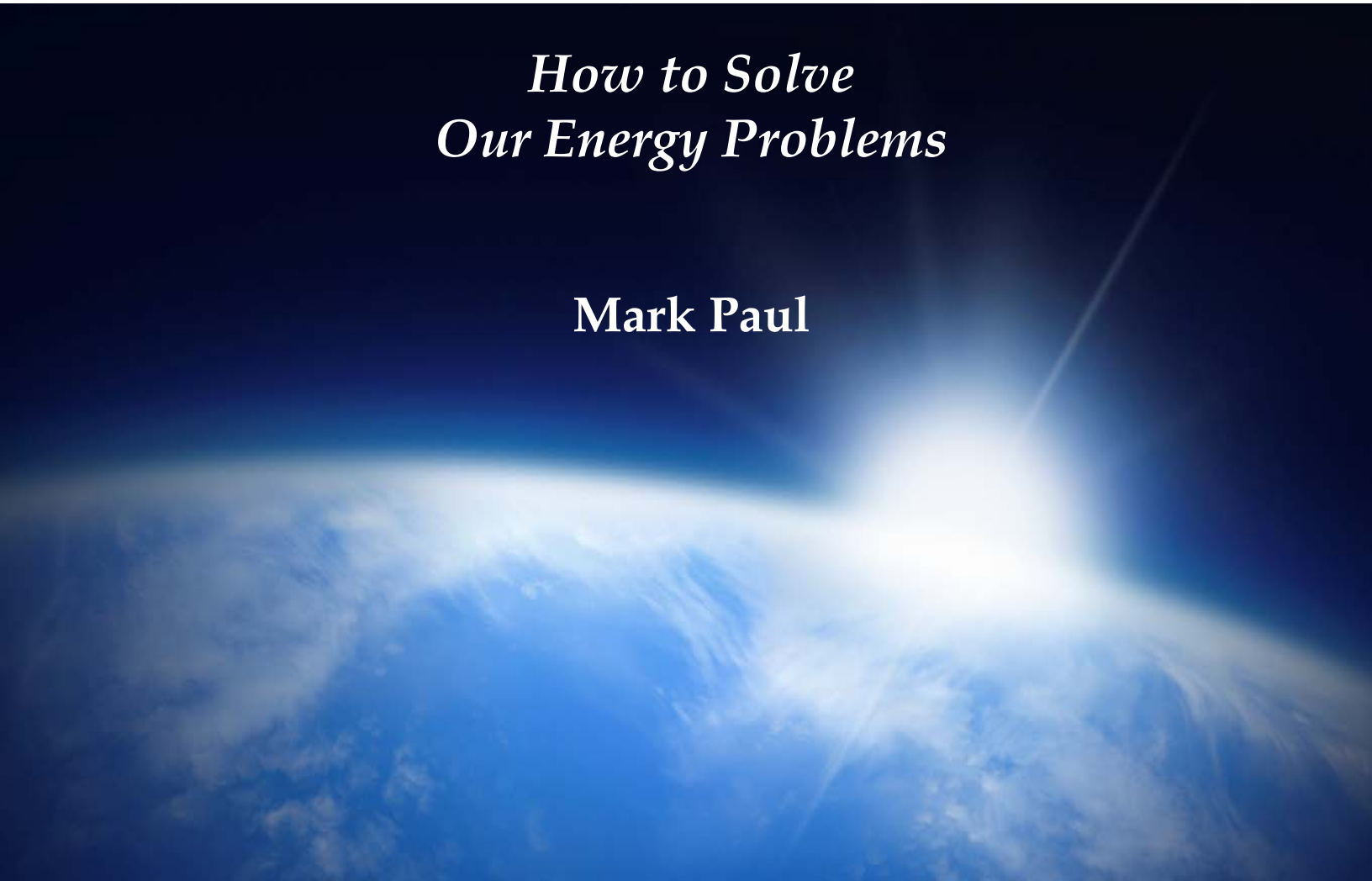
The 21st Century Energy Initiative



How to Solve Our Energy Problems

Mark Paul

The Blame Game

Excerpt from
The 21st Century Energy Initiative

How to solve
our energy problems
once and for all

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The Blame Game

We cannot solve our energy problems once and for all, until we spend some time looking at how different people view the current situation. And then taking action to integrate (or overcome) these assumptions and perspectives into a long-term and lasting solution.

In response to surveys I created in 2003 and 2005 [20], people tended to "blame" others for our situation. In fact, blame was a fairly large component of their responses. Therefore, I thought it should be explored further.

This may be a difficult chapter to embrace. I almost did not write it, because of the way it *could* be taken by readers. The "opinions" in each section of this chapter are based on the many people I have talked with over the past few years and are provided simply to paint a picture of how different people view the situation. There is no one right answer or reason we are in the current situation. But solving this grand challenge will require not only science and policy, but also significant faith and determination – that will help us remain steady over the coming turbulent times.

By exploring several differing perspectives, I hope that it becomes clear that in order to actually *solve* our energy problems, once and for all, we will need to wrap our brains around different ways of thinking. Albert Einstein said it best: "*We cannot solve our significant problems from the same level of thinking we were at when we created these problems.*"

First, we must recognize how (perhaps) our own opinions and beliefs may be getting in the way of true, long-term solutions that benefit us all. Only then will we be able to overcome the difficult challenges we have built for ourselves over these past several decades. (For example, many respondents to the survey thought that Hydrogen was "free!" It is most certainly not.)

People who may be offended by reading this chapter include: Staunch Democrats & staunch Republicans; those who ride their bikes & take public transportation – and believe everyone else should, too; those who think they have a God-given right to drive SUVs, and those who believe that we should simply take over the Middle East – since America built the oil wells in the first place.

Even if you don't fit into any of these categories, you may be offended. For that I apologize in advance.

Here we go

There are plenty of reasons why the price of gas is so high. And there are plenty of people, organizations and situations that are the cause. It is far easier to point the finger at someone else than ourselves, and it feels so much better when we do. Doesn't it?

Let's look at "others" we can blame.

Oil Companies

There is a perception that the oil companies are gouging consumers and businesses worldwide. Let's explore this further.

Oil companies are in business to provide product to a ready market. Without these companies, no oil would have ever been produced and our civilization would have not progressed to the state it has. In getting to a place where they *could* produce enough oil for the world's needs, oil companies have taken significant financial risks.

As is the nature of a free-market system, each oil company makes a profit from the sale of their product (the other side of taking risks). Some non-oil companies (like software companies) have large "gross margins", with net-profit in the 20%+ range, while other companies (and industries) don't' make a profit at all. Oil companies make about 5% to 10% profit from their efforts. Without profit motive, people and companies would not be motivated to progress: We've already seen that communism stunts progress.

Example of effect: With gas at $4.50, a 7.5% profit equals 34 cents. Gas would still be over $4 a gallon if 100% of oil companies' profits were taxed!

Root cause: If there were *never* a need for oil, there would *never* have been oil companies. That is, if we wish to blame the oil companies' desire to: [1] provide a product to address a real need and [2] provide a reasonable financial return for their shareholders, then we need to blame [A] those with the need for oil (you and me, and energy to transport products to the stores where we buy them: like bicycles) and [B] those who invest in oil companies. Who invests in oil companies? Individual investors, pension funds, etc. Who has money in savings – investing in pension funds? You and me. Are we, therefore, to blame?

Middle East Countries

The Middle East has most of the world's supply of easily-accessible oil. We need oil. And although Canada supplies more oil to the U.S. than the Middle East[21], Middle East countries (also) supply a product where there is an identified need.

An aside: Where do you work? Is there a need for the products or services your company (or organization) provides? If you live in the Pacific Northwest, perhaps the natural resource (or commodity) is wood products. If you live in the south, perhaps it's cotton. In Silicon Valley, perhaps it's technology.

Yes, there are many more complications than this simple example. However, your company likely has no extremists looking to convert others, through force. Canada certainly doesn't. (I have deeper personal opinions about this, but this is not a book on religion or personal opinions, it is a book on how to solve our energy problems.)

The point is that countries with natural resources convert those resources so that their national health and well-being are improved.

Root cause: If there were no need for oil by consumers and companies, the Middle East would not be producing oil. Do you have a car or truck? Did you purchase a bike, which was made outside of your home state – that needed transporting to your state? Does the income you generate come from a company that uses oil? Perhaps we are to blame.

China, India & Other Countries

During the 1990s, U.S. companies dramatically ramped up purchasing goods & services from lower-cost countries. This was a continuing trend, due to trying to keep costs low (in a free-market system, consumers want the lowest prices possible). In the 1960s, we imported products from Japan. As prices in Japan started increasing (due to increased demand), our importing shifted to Korea. We then shifted to China. China's work-force capacity is rather large, so this has stayed fairly constant, although (predictably), their prices have started increasing, and the longer-term ramifications of our (and others') buying habits – wanting low-priced goods – has been a major factor in the Chinese government dramatically increasing their power-production infrastructure.

The resultant increase in carbon-production has been likewise dramatic.

We started buying (cheaper) *services* (call-centers and software development) from India. As a result, their standard of living has increased and their need for progressively more power and oil has also dramatically increased.

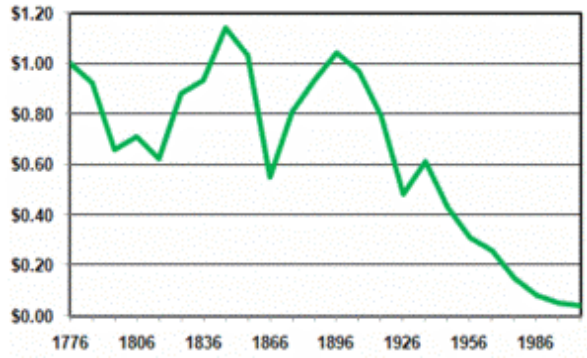
Root cause: Consumers want high-quality, low-priced products and services. Companies are in the business of providing them. Americans seem more interested[22] in cheap fuel than they are the benefits that clean /renewable fuel would provide. Are we to blame?

An interesting note about not-so-free countries: Many foreign governments are subsidizing oil. This results in low fuel prices for their consumers, which means there is no real incentive to reduce oil use. Government subsidies thereby add upward pressure to the price of oil. Letting the free-market solution do it's thing, "floating" the price of oil to consumers world wide would have the effect of lowering demand, thereby lowering prices.

The Falling Dollar

The declining value of the dollar (from 2000 – 2008) accounts for nearly $1 of the increase in the price of gas (assuming a gallon of gas costs $4.50. If the dollar remained as strong as it was in 2000, gas would be about $3.50/gallon! *And if the dollar had actually increased in strength the same amount it decrease, gas would now be about $2.50/gallon.* The value of the U.S. Dollar has fallen dramatically[23] since it was first put in place in the late 1700s. The dollar has lost about 95% of its value over this period.

Falling value of the dollar:

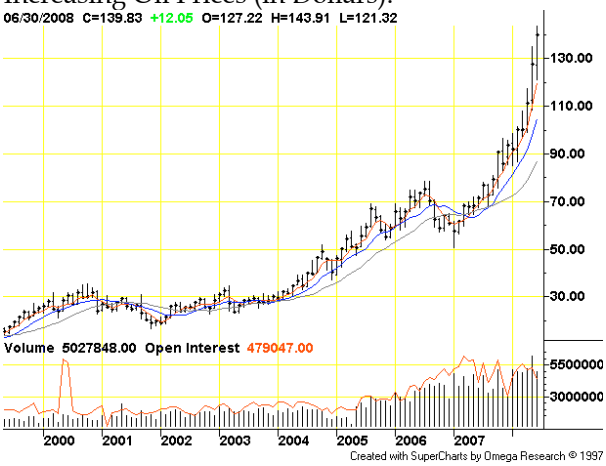


The graph on the right shows how the dollar has fared against a newer, (now) stronger currency (the Euro)[24]. Not well: the graph on the left plots the strength of the Euro as an inverse graphic against the falling value of the dollar.

Strengthening Euro against the dollar:

… and comparing this (below) with the price of oil[25] over the same period, one can see that, indeed, there is a correlation between the falling dollar and rising oil prices. In fact, from the middle of 2000 to the beginning of 2008, the Euro increased 64% (90 cents to $1.475 per Euro). To the middle of 2008, the Euro increased 75% (to $1.575 per Euro).

Increasing Oil Prices (in Dollars):



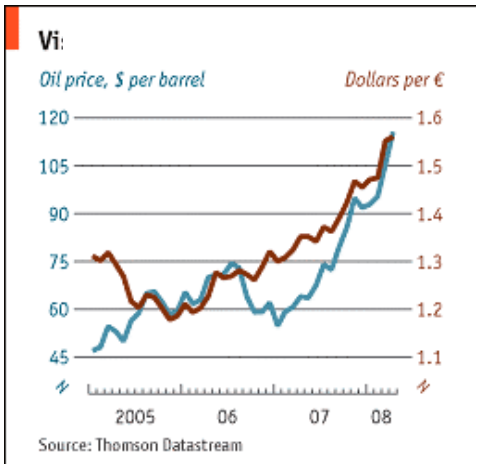
Meanwhile, oil prices increased 300% (a factor of 3). Looking towards the middle of 2008, oil increase is 400% (a factor of four).

Combining the value of the dollar and the price of oil, the connection becomes quite clear.

The challenge in making such a claim is that there is also a strong correlation between rising oil prices (cause) and decreasing dollar value (effect). What this means is – if we do not work on the root cause of a falling dollar, rising oil prices will make the current downward spiral of the dollar seem trivial – and hyper-inflation is sure to follow. *However, the dollar increased during the year of 2005 and the price of oil decreased a year later… indicating a dollar-to-oil correlation more than an oil-to-dollar correlation – or "cause & effect" relationship.*

Assuming a direct correlation, one could argue that (from the end of 2000 to beginning of 2008), the decreasing dollar value accounted for 21% [26] of the (increasing) price of oil. Due to the rapid increase in oil prices since the beginning of the year, I suspect that the downward spiral started in earnest the first half of this year, and – short of dramatic demand reduction – is the beginning of even more radical price increases.

If the declining value of the dollar accounts for 21% of the price of oil, one can surmise that nearly one dollar of the price of gas increase is

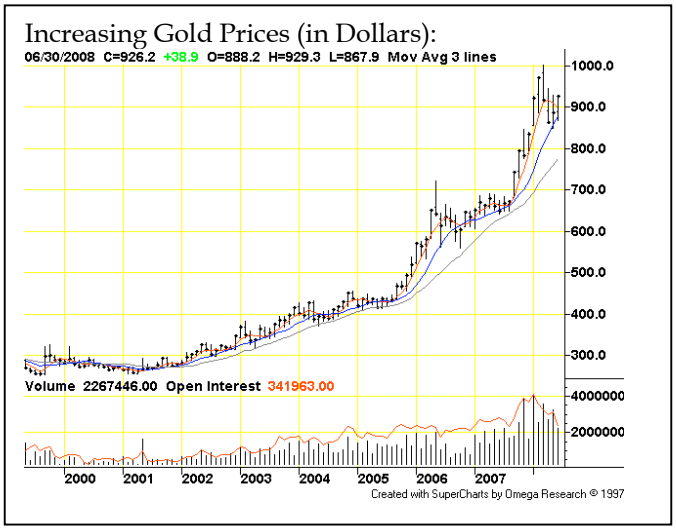


due to the falling dollar ($4.50 x 21.333% = 96 cents). If the dollar had actually strengthened by the same amount as it weakened, *the price of gas would be nearly another dollar less, or almost $2.50*. So, a question might be: "How do we strengthen the dollar?"

One might want to look upstream from oil prices to determine what caused the dollar to collapse. Consumers shopping at Wal-Mart, sending dollars to China? The Federal Reserve allowing interest rates to be too low for too long? A Bush (II) policy of no dollar support, to "export our way out" of the 2000 economic slowdown?

For those who are skeptical about using the Euro to compare the dollar against, the graphic on the next page shows how the dollar has faired against gold [27]. It is clear that the declining dollar value may actually be *70%*[28] of oil price increases!

Increasing Gold Prices (in Dollars):



Root cause: The uptick in the dollar value in 2005 and dramatic decrease in oil prices one year later, indicates there are decisions and actions (or lack of decisions and actions) that led to the falling dollar. Those need to be reversed. We need Action This Day!

Washington D.C.

There is a perception that our elected officials are not doing enough to lower the price of gas at the pumps. Let's look at this from several angles.

- Democrats: From the perspective of Republicans, a few of the major Democrats' messages seem to be: [1] drilling for domestic oil is bad; [2] if we could all just turn down our lights and air conditioners, we could reduce demand; [3] the bad oil companies are gouging us and their "windfall profits" ought to be taxed; and [4] the bad car companies are selling more and more SUVs and regulations ought to be put in place to dramatically increase gas mileage to reduce oil use.

There is some truth to each of these positions, but they miss the point: It seems Democrats want to control companies and profits, *instead* of letting the free-market system "do it's thing" – allowing the market to shift to changing conditions. (Significantly higher prices will encourage people to buy more fuel-efficient cars.)

Taking each of these separately:

[1] Drilling for domestic oil is bad. There is a growing CO_2 problem, worldwide. With China building many new coal plants every year, this problem is growing even more urgent. Global temperatures have been rising[29] and Climate Change is causing serious concerns and problems. (Recall the "Global Temperatures" graph, earlier.)

Therefore, drilling is not the preferred approach. However, by severely limiting drilling, the Democrats' actions (or inaction) have, in fact, helped increase the price of oil. I believe that if drilling is a (short-term) *part of* a larger long-term sustainable, low-carbon strategy, it may well be more palatable.

[2] Turn down lights and air conditioners: Since oil is a commodity, reducing demand will reduce prices. However, the bulk of oil is for transportation, not electricity. Energy efficiencies could make a dramatic (positive) effect in reducing energy needs, and with the coming "transportation shift"[30] problems (due to significantly more electric cars), utility energy efficiencies will become ever more important. That said, progress usually means taking steps forward, not backward. I've been told "If the Democrats all had their way, we would all take giant steps backward; riding bikes everywhere, taking public

transportation everywhere, and a host of other, quality of life reductions." This is the "progressive" party? I do not believe we can "save our way to prosperity"; but need to *innovate* our way out of our current problem. More on this, in the Solutions Chapter. Bottom line: Energy efficiencies *are* the right thing to do – and should be done. However, *mandating* everyone's lifestyle through laws and regulations does not represent a free country, and impinges on liberty.

[3] Oil companies are gouging us: Implement "windfall profits" taxes (WPT). The last time this was done, no long-term solution was created. In fact, oil dependence grew from 25% to 60%.

Worse, looking at the numbers just a little deeper, we can see that the motivation did not turn into action:

WPT was envisioned to bring in anywhere between $320 billion and $393 billion[32]. From 1980 until they were phased out in 1988, the total taxes generated were about $80 billion (current-year dollars). The argument in favor of this tax was to promote renewable energy, by investing the tax "revenue" into alternative and renewable research.

"*By 1988, though, opposition had grown to a fever pitch. The tax eventually succumbed to its own disappointing results. It had proven to be a heavy administrative burden, both for taxpayers and the IRS. Oil industry representatives claimed annual compliance costs of $40 million to $50 million. Press reports suggested the IRS was spending as much as $15 million to collect the tax. Overall, it was a heavy cross to bear, complained oil executives. In 1984 a General Accounting Office report called the WPT "perhaps the largest and most complex tax ever levied on a U.S. industry."* [33]

Looking a bit deeper (at Energy Information Agency analyses & reports), one finds that federal investments into renewable energy totaled $3.4 [34] billion (current-year dollars), from 1980 until 2002. For energy efficiency research, it was less.

By comparing the amount that was taxed versus the amount that was invested, the following "efficiency" can be calculated: That is, how well the U.S. Government kept its promise to invest these taxes into renewable energy: 4.25% ($3.4B/$80B).

When compared to non-profits, where anything under a 90% utilization factor is usually too low for people to donate their hard-earned money, a 4.25% investment factor is ridiculously low. Perhaps even criminal. It is certainly unethical and at a minimum indicative of The Big Lie: Make consumers feel better about their elected officials who supposedly Did Something.

Even more important is the fact that as the result of oil companies having $80 billion fewer dollars to explore for more resources: [1] the seeds were sown for future price increases, [2] oil companies started looking to other countries, where regulations were lower, [3] in order to conserve cash, R&D spending was reduced dramatically – again, hampering the ability of oil companies and utilities to cost-effectively and efficiently produce their product.

[4] Regulate car companies to produce higher-mileage vehicles: Regulating producers (telling them what they can and cannot produce) of goods is anti-capitalist. It could be considered socialist and even communist (where "state planning" caused the suffering and poverty of millions of people in the former Soviet Union.) Those who

produce goods are doing so, due to consumer demand. Would the Democrats want to regulate other industries out of business? Mom & pop shops? Video rental stores? Grocery stores? Hospitals? Wood products producers? When would "enough" regulation be enough?

Companies sell gas-guzzling SUVs because people buy them. Or they did until the price of gas (a free-market mechanism!) caused different behavior.

Root causes: Focusing on the price of gas (effect) instead of root causes had, and will have severe unintended consequences.

Additional root causes to consider: [1] The need for politicians to show their constituents that they are "doing something" can lead to egregious miscalculations, resulting in unintended consequences. (Think corn ethanol and food prices.) [2] These very actions (being considered again, today) will have the same unintended consequences. [3] Without thinking through alternative ways to leverage the billions in profits – toward the true end of *enabling* oil companies' *increased* profits – in renewable, sustainable and home-grown ways – democrats will be sowing the seeds of price increases in the future. With peak oil, that would make the current volatility and increases in gas prices seem mild.

- Republicans: From the perspective of Democrats, let's explore what Republicans have been doing to combat the high price of gasoline. A few of the major Republican messages seem to be [1] Drill more; [2] Take over countries that have oil, or threaten our "interests"; [3] Don't worry about saving electricity through efficiencies; [4] "Problem? What problem?"; and [5] "Climate Change is a hoax."

Taking each of these:

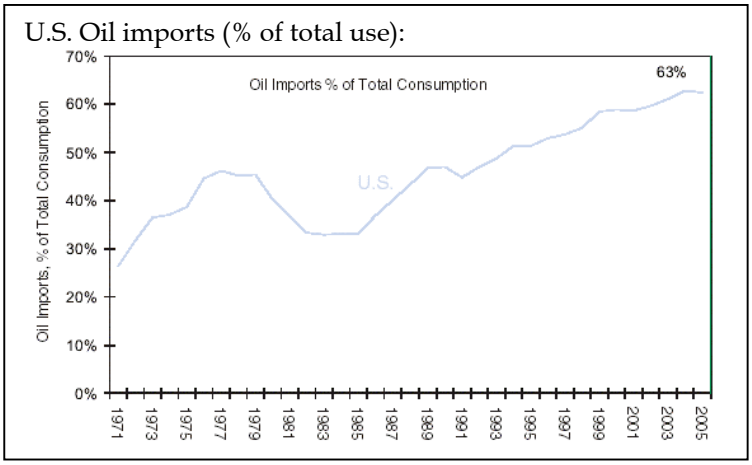
[1] Drill more: If more oil is extracted from United States locations, this would (arguably) moderate prices. It would certainly reduce foreign oil dependence. However, it does nothing to reduce carbon emissions. Without acknowledging Democrats' (valid) concerns - without discussing a comprehensive solution to energy independence in a renewable fashion - this mono-focused "solution" is not a solution at all. Or at least not one for the long term.

[2] Protect our "interests": After 9/11, people in America came together at a very deep and emotional level for the first time in a generation. Democrats and Republicans, rich and poor, races and religions. However, this camaraderie did not last very long. Although it certainly makes sense to bring to justice those who killed many Americans, *starting* a war (in Iraq) is not the American way. We prefer to end conflicts (through force if needed). Being an aggressor did nothing to bring together people in our nation or the world. If the war was not about revenge or oil, then we would have concluded "Mission Accomplished" after Saddam Hussein was found, or after he was executed. But that did – and has not happened.

[3&4&5] Don't bother with energy efficiencies / "Problem? What

problem?": / *"Climate Change is a hoax."*: All of these "fit" within the same bucket, and they all have the same theme – "What, me worry?" This level of inaction and blaming the "other" side has done nothing and will do nothing – to solve our energy problems… once and for all.

- Presidents: It is fashionable to blame President Bush, solely, for the current high price of gasoline. (Or whoever is in office.) This takes no account of the fact that both Democrats and Republicans have held the White House in the past 35 years – from when this country received its first wake-up call (in 1973) that something was going terribly wrong. If we are to blame *this* president (and his party), then we must blame every president since 1973. Our oil dependency has increased from 28% to over 60%[35] since 1971. During the Carter years, U.S. (foreign) oil dependency increased. During the Reagan years, it actually *decreased* (mainly due to Alaskan oil coming on line). However, he did not develop and institute a Strategic Energy Plan. Overall, *no* administration has developed a long-term energy strategy that has worked, or at all.



Blaming presidents misses several points: It is not the president that dictates prices. It is supply and demand. Yes, the current administration can put into effect policies that exacerbate the fall of the dollar and make other decisions that do not support oil independence. Even if it is only the president that causes high-energy prices, then the *American people* have not seen fit to elect leaders who would make bold decisions to dramatically reduce our foreign oil dependence.

Case in point: in 1980, presidential candidate John Anderson (was the only candidate who) proposed a 50 cents per gallon gas tax that would be *directly* applied to renewable energy research and development. He received 7% of the vote. His major platform was energy independence. 93% of voters voted with their pocketbook, instead of with a long-term solution in mind.

In 1992, Ross Perot was a maverick who garnered nearly 20% of the popular vote, but did not win because he was honest with the American people – he recognized – and publicly stated – that *we* are causing financial ruin to this country due to the (short-term) decisions being made in Washington, D.C. He was right, then, and he is right, now.

Root cause: Just as shareholders elect new (or sue) Board of Director members when the CEO brings financial ruin to their company, perhaps we should look at who continues to vote in those politicians – time after time – who are more adept at getting elected than actually solving problems. Perhaps, we are to blame?

- The Two-party System: Even though there are several factors in successfully leading a country, both the Democratic and Republican political party machinery tend to focus on the galvanizing issues, instead of those issues that all Americans hold dear. Freedom and liberty seem to take a back seat. As do innovation and teamwork – to get the job done. For the good of all.

It might be insightful at this point for you to take a brief (yet difficult) 10-question quiz. To see your *own* political leanings from a different point of view, and to gain a unique perspective about just how polarized the two party system has become, take the quiz on The Advocate website: www.theadvocates.org.

It may be useful to view five sets of ideals, based on two axes: How much you believe in and support [1] economic freedom and [2] personal freedom:

Left (Liberal)
Liberals usually embrace freedom of choice in personal matters, but tend to support significant government control of the economy. They generally support a government-funded "safety net" to help the disadvantaged, and advocate strict regulation of business. Liberals tend to favor environmental regulations, defend civil liberties and free expression, support government action to promote equality, and tolerate diverse lifestyles.

Centrist
Centrists espouse a "middle ground" regarding government control of the economy and personal behavior. Depending on the issue, they sometimes favor government intervention and sometimes support individual freedom of choice. Centrists pride themselves on keeping an open mind, tend to oppose "political extremes," and emphasize what they describe as "practical" solutions to problems.

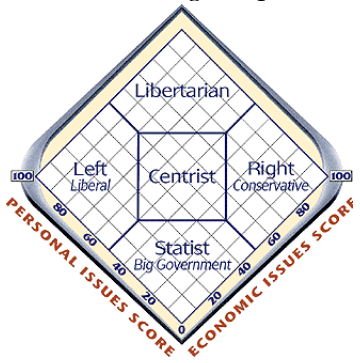
Right (Conservative)
Conservatives tend to favor economic freedom, but frequently support laws to restrict personal behavior that violates "traditional values." They oppose excessive government control of business, while endorsing government action to defend morality and the traditional family structure. Conservatives usually support a strong military, oppose bureaucracy and high taxes, favor a free-market economy, and endorse strong law enforcement.

Statist (Big Government)
Statists want government to have a great deal of power over the economy and individual behavior. They frequently doubt whether economic liberty and individual freedom are practical options in today's world. Statists tend to distrust the free market, support high taxes and centralized planning of the economy, oppose diverse lifestyles, and question the importance of civil liberties.

Libertarian
Libertarians support maximum liberty in both personal and economic matters. They advocate a much smaller government; one that is limited to protecting individuals from coercion and violence. Libertarians tend to embrace individual responsibility, oppose government bureaucracy and taxes, promote private charity, tolerate diverse lifestyles, support the free market, and defend civil liberties.

The five-area graphic, where your answers to the 10 difficult questions will "map" your political leanings, looks like:

Political Leanings map:



By the way, two innovative thinkers (John Anderson and Ross Perot) – who looked to solve difficult and long-standing challenges were both independents.

Root cause: Election after election, I have heard people say "If I weren't wasting my vote, I would have voted for XYZ" – where "XYZ" was the third party candidate. In fact, in 1992 I (anonymously) polled about 100 people regarding which presidential candidate they voted for and the candidate they would have voted for – if *only* their one vote counted. Ross Perot would have won, if they just voted their conscience. Perhaps we should just vote for the most logical person who is more interested in renewable power, instead of political power. Of course, this would take true leadership – doing what's right for Americans instead of what's right for election purposes.

- The Federal Reserve Board: It can easily be claimed that loose-money policy for the past 20 years has caused the dollar to fall relative to international currencies, thus exacerbating the rise in oil prices.

So, here we are: paralyzed by our own inability to make politically difficult decisions, vote for the right leaders, and move things forward from a political perspective. Until this deadlock ends, until both sides of the aisle can actually work together[36] to solve these problems, we will continue down the slippery slope we have been on for quite some time.

Progress

Perhaps we could blame the very nature of humans: To create a better place for our children and grandchildren.

Perhaps procreation is to blame, because children become adults who drive and use electricity. Without having children, we could stop building new buildings and homes and cars. (And yes, I believe this is ridiculous, and another attempt by some to control others.)

A City Commissioner in a major U.S. city publicly stated he wants his "feet, streetcars and bikes" transportation proposal to make Portland like it was "circa 1920". Apparently, this is what "progressive" means. Multi-mode transportation can co-exist, and should. But ensuring that $4.5 billion of the $700 billion bail-out package is provided to bikers – with exactly zero $s going to *developing* low/no-carbon emission energy production through technology development – just doesn't seem to make sense.

Root cause: Who wants to improve our standard of living? I believe we all do. We may have slight disagreements of what that means, but anyone who has children certainly can't hope for a *worse* world for them. Perhaps our desire to progress is causing the high price of gasoline?

Cheap Oil

Of course, with the price of oil collapsing after the 1970s oil price spikes, there was no real incentive to find lower-cost alternative fuels. There was no impetus to invest in energy efficiencies. In fact, with cheap oil, cars got bigger, building boomed and our need for oil *increased* as a result of cheap energy. We all got used to it, and the status quo seemed OK.

Root cause: By not taking a *long*-term view (and investing in alternatives before there was a dire need for them), we sowed the seeds for future supply/demand spikes, once the developing nations started increasing their appetite for energy. The root cause in this case is our own inability to invest / perhaps even understand the concept of deferred gratification at a national level.

Strategic Reserve / Gas-tax "Holiday"

A direct effect of short-term thinking is to assume that by "uncorking" oil from the strategic reserve fund or removing the Federal gas tax even for a short time, could actually make a long-term difference. But apparently, long-term solutions aren't what we seek. We want the price of a gallon of gas to come down, *now*! Damn the future. (And we thought the 80s generation was the "me" generation!) Just as ridiculous is "giving" every citizen $1000 due to high-price hardships.

Root cause: As above, short-term thinking is the culprit.

Addiction

Not much needs to be said here, because this is a true "root cause". Cheap oil has exacerbated our desire to build an economy based on oil. Who wouldn't build an economy based on a certain fuel, if cheap sources of energy were prevalent? If nice houses were cheap, everyone would have one. It gets back to our desire to up-level our standard of living. This is not a bad thing, it is just a "thing" – that has been a root cause of high oil prices, without long-term thinking and therefore long-term solutions.

Capitalism / The Free-Market System

Many blame not only capitalism but also profit-seeking. Without profits, where is the motivation (from a business perspective)? There is nothing wrong with non-profits, and there is nothing wrong with profit-making. (Many may disagree.) Again, it's about building wealth, progressing our standard of living, and doing so in a way that rewards excellent behavior. Yes, there are bad people in business who pillage and plunder for their own good. These people are also found in Government. All sorts of fraud and theft occur in both Government and business. However, when Government is inefficient[37] – and they need more money – they simply raise taxes. When businesses are inefficient, they go out of business. Yes, this causes problems with people's lives and livelihoods. But those who go out of business, learn. They become stronger. They (generally) don't make the same mistake twice. Standards of living increase as a result. Without the financial risks associated with potential financial rewards, governments have no incentive to dramatically improve.

This is akin to the concept of "deficit irrigation": Deficit irrigation[38] is an irrigation practice where water supply is reduced below maximum levels and stress is allowed with minimal effects on yield. Plants' roots go deeper, making them healthier. Under conditions of scarce water supply and drought, deficit irrigation can lead to greater economic gains than maximizing yields per unit of water for a given crop. Farmers are more inclined to use water more efficiently, and more water-efficient crop selection helps optimize returns. This is a "green" concept, and life-long learning aids in this approach. Lessons happen much more quickly when people fail, than when they succeed.
The unintended consequence[39] of always bailing out someone or some organization or class of people is – they become weaker. And more reliant on being bailed out. We see this happening all over the place, including the financial markets, today. The unintended consequences of bailing out homeowners, or investment banks or Freddie Mac / Fannie Mae will further impede their ability to learn, and will further cause a decline in the value of the dollar: Making gas prices even higher.

The unintended consequences of trying to limit the free hand of the market have dire results for us all. Anti-capitalism is growing more rampant, in that we continue to look to the Government for solutions. Our ability to solve our own problem atrophies and it becomes even more difficult to solve our own problems, requiring more and more government. Taking government control / ownership of all problems to the limit, leads us to 100% taxation (everyone works for the government, and in order to pay for it, everyone has to contribute their own "salary"). This means zero incentive to improve, because 100% of whatever our hard work generates is "taxed".

There are also good people in business and governments: People who want what is best for their stakeholders, stockholders, employees, customers, vendors and families of all who are involved. We will discuss this aspect of solving our energy problems in the next chapter.

Consumers

- Hopeful thinking: There have been endless emails forwarded that tout reducing the price of gas: "Don't buy gas on Thursdays." Or, "Don't buy gas from Chevron." These do nothing to reduce demand, and in fact, cause more supply (delivery / distribution) problems, which drive *up* the price of gas. Some may say that the only thing that will relieve price pressures is to stop driving.

  Let's explore this further: U.S. light-duty vehicles account for[40] about 42.3% of petroleum use. Assuming that the U.S. is the only country that uses oil, and assuming a linear relationship (zero use would drive the price of oil to zero), then stopping *all* U.S. consumer driving would decrease the price of gas by about $1.91 (assuming $4.50/gallon gas). This would bring the price down to $2.59 / gallon. We would still need to import oil. Since we use just over 52% of the world's oil, the effect would be cut in half: if all consumers stopped driving, the price of gas would drop to $3.54.
- SUV drivers: It is interesting that people blame SUV drivers – and want them to drive more fuel-efficient cars. We don't know how other people live their lives. Perhaps they have 5 kids, or have a daycare business, which requires additional seats. Perhaps they are musicians, and need to transport their equipment – and can't afford two cars – an "around town" car and work vehicle. There are many reasons people need larger vehicles, and for those who can afford it and afford the extra fuel costs, who are we to dictate how someone else lives?

  In fact, I know someone who gave me a hard time for owning a 4-wheel drive vehicle (I lost a fuel efficient car when I hit a patch of ice, and swore I would never put my family in danger again). When we compared how much gas I use (I mainly work out of my home office, so my "commute" used exactly zero gallons) against what she used, she determined that she used even *more* gas than I did – in her fuel efficient car!

  Before we start blaming others' driving habits, it might make sense to understand their perspective, and allow them the right to drive whatever they can afford to. (With SUVs making up about 45% of all new cars, shifting to zero SUVs would only make an impact of about 50 cents[41] / gallon in the price of gas.

And that is if *all* SUVs were taken off the road.)

Likewise, if you curse bike-riders, understand that they have a *choice* for a healthier, low-carbon lifestyle. It may not be yours, but they have the right to do so.

Bottom line: It seems this nation is becoming more opinionated – that "others must adopt our lifestyle" – and therefore we are less tolerant. By continuing to blame "the other guy" for our problems and insist that it is someone else's fault, we fail to recognize some fundamental truths about the *right of personal choice*.

I believe that the major cause of our oil dependence and energy problems has everything to do with lack of accountability, lack of leadership and short term thinking. Analysis paralysis, bickering and waiting for "others' to come around to our way(s) of thinking is causing no real forward motion.

So?

In 1973, Denmark was 98% dependent on foreign oil. As a result of the tremendous economic shock to their economy, they (collectively) made a decision to *do* something. As a result, today, they are a net-exporter of renewable energy technologies. This is like the frog in the water: When a frog is thrown into boiling water, it will jump out. If a frog is in lukewarm water that is slowly brought to a boil, it will stay in the water and die. I fear the U.S. was in lukewarm water in 1973, while Denmark was thrown into boiling water.

Perhaps, now we realize we are in boiling water and will collectively make the bold decisions and take urgent action to make a significant difference to solve our energy problems, once and for all.

References

Provided below are reference shown in this book. I apologize in advance, if any of these links are "broken". There were valid as of the initial e-printing of this book.

20) http://www.energy2025.com/H2_Research.pdf

21) http://en.wikipedia.org/wiki/Oil_reserves#cite_note-17 & http://www.eia.doe.gov/pub/oil_gas/petroleum/data_publications/company_level_imports/current/import.html

22) http://www.energy2025.com/H2_Research.pdf

23) Sources: http://upload.wikimedia.org/wikipedia/en/c/c9/Dollar_value_chart.gif & http://content.answers.com/main/content/wp/en/thumb/b/bf/300px-Dollar_value_chart.gif

24) http://futures.tradingcharts.com/chart/EC/M

25) http://futures.tradingcharts.com/chart/BC/M

26) 21.3% = 64% ($ decline; or Euro increase) / 300% (oil increase)

27) http://futures.tradingcharts.com/chart/GD/M

28) From 200 to 2008: Gold increased from $275/oz. → $900/oz. = 3.27x increase. Oil: increased from $30 → $140/ barrel = 4.66X: 70% of the price increase in oil is due to the falling dollar.

29) http://www.outsidethetent.com/photos/global_warming_graph.png &

http://geology.com/news/images/global-warming-graph.jpg

30) Oil-to-grid: Energy shift… necessitating a "transportation shift"

31) http://www.taxfoundation.org/news/show/1168.html

32) http://opencrs.cdt.org/document/RL33305

33)www.taxhistory.org/thp/readings.nsf/cf7c9c870b600b9585256df80075b9dd/edf8de04e58e4b14852570ba0048848b?OpenDocument

34) Page 231; Figure C-4: http://www1.eere.energy.gov/ba/pdfs/strategic_program_review.pdf

35) http://www.pimco.com/NR/rdonlyres/CCB53675-BF06-423E-977D-C234B2169387/1850/chart7.gif From a personal email to me - from Ron Bengston of www.americanenergyindependence.com: "The increase was very slight, and only because U.S. production was declining. Beginning in 1979, foreign oil imports began to decline because in July 1977 oil from the Alaska Pipeline began flowing into the Valdez Marine Terminal, and on August 1, 1977 the oil tanker ARCO Juneau departed from Valdez with the first shipment of North Slope crude oil. This explains the decrease under the Reagan admin. By 1984 the Alaskan pipeline was carrying 2 million barrels of oil per day. This combined with the large percentage of small fuel efficient cars that had finally penetrated the market (in response to the 1973 embargo) created the statistical fact showing decreasing oil imports under Reagan. But then Reagan opened the flood gates of cheap Middle East oil (reversing the Nixon, Ford, and Carter programs aimed toward energy independence). From 1986 on, U.S. oil imports increased upward to over 60% today. Jimmy Carter was the last U.S. President to have a real energy Policy. If Reagan had not killed Carter's U.S. Synthetic Fuels program, the program and technology would be fully mature today, producing diesel and jet fuel for under $2 per gallon from USA coal."

36) Question & Idea: Why does each party have to sit on opposite sides of one another in Congress? This breeds contempt for the "other" side. And it further divides the parties, which does not support the notion of helping one another overcome serious, non-political issues.

37) An example of Government waste ($70 billion a year [yes, with a "B"]) can be found, here: http://www.energy2025.com/Spare$70Billion.jpg)

38) http://www.fao.org/docrep/004/y3655e/y3655e01.htm#a

39) Note: For further discussion on "unintended consequences" go to http://en.wikipedia.org/wiki/Unintended_consequences.

40) https://eed.llnl.gov/flow/images/LLNL_Energy_Chart300.jpg

41) $1.91 reduction of all vehicles; ½ that, accounting for Rest-of-World oil consumption; ½ of that, if all SUVs were taken off the road – although fewer than ½ of consumer vehicles are SUVs. (About $2 divided by 2… twice.)

About the Author:

Mark has led small to public companies in interim executive roles, and has consulted with hundreds of small to mid-sized companies. He has successfully brought advanced technology to market over the past 30 years. He held senior executive positions at a Northrop Corporation, where he built a 250-person, $50 million international technology business unit in 2 years. Mark had full P&L responsibility for this business unit. He is an Executive-in-Residence at Oregon's Technology Business Incubator, published The Entrepreneur's Survival Guide; and How to Attract Significantly More Customers; has a degree in Physics (U.C.I.), a patent and is passionate about enabling the United States to be a net-exporter of renewable energy / technologies. He is President & CEO of NXergy, Inc. – a Renewable Energy Technology Accelerator. Mark can be contacted at: independence@ energy2025.com

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