

Economic Recovery and America's Energy Infrastructure

The Future of Energy is A Crisis

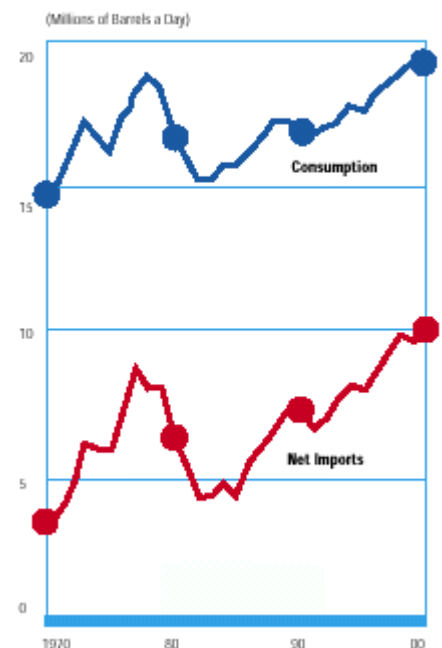
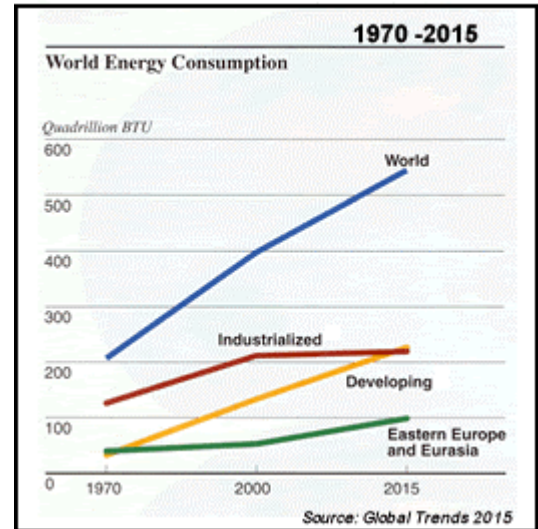
A third argument that inhibits economic recovery is the state of America's energy infrastructure. According to the President's energy report, "America in the year 2001 faces the most serious energy shortage since the oil embargoes of the 1970's. A fundamental imbalance between supply and demand defines our nation's energy crisis."¹ As pointed out in previous installments in my Storm Series, we have run out of spare capacity in oil, natural gas, and electricity. Our dependence on foreign oil has never been greater. We now import over 51% of our oil versus 25 to 30% during our last energy crises back in 1973-74 and 1978-79. Low prices and under investment have caused our energy infrastructure to remain neglected and decayed. We are now dependent on OPEC and other foreign powers for much of our oil and natural gas energy needs.

In the past, recessions have always been associated with higher energy prices. Higher energy prices were contributing factors to the recessions of the seventies, early eighties and the last recession in 1991. Higher energy prices are impacting the current economic downturn. Consumers and corporations are spending more for energy in the form of higher gas prices and higher utility bills. The tax rebates don't come close to covering the higher energy costs hitting consumers. The way we handle this crisis will frame the severity of the approaching economic storm. This time, our energy crisis is not a temporary event caused by consumer hoarding as in the 1970's. For far too long energy needs have been neglected. Americans were led to believe that technology would reduce demands placed on energy. Instead technology has created new demands. There is also widespread belief that oil is plentiful. Oil may be abundant in the Middle East, but not in the West. Industry insiders are alarmed at how fast our oil reserves are dwindling.

President Bush is the first president since Ronald Reagan to address this issue. His plan strikes a balance between the need for more supply and the need for conservation, between drilling for oil and natural gas, and new sources of energy. Yet Congress dithers over the President's energy plan. The fact that we are even debating drilling for oil at ANWR is a complete absurdity. The debate is over 2,000 acres of mosquito-infested, muddy terrain the size of an airport. ANWR contains close to 19 million acres of land. The area of drilling is not a pristine wilderness. It is tundra. The caribou are not endangered – they are thriving.²

The Facts on Energy Consumption

What is often forgotten in this debate are the facts. In 1990, energy consumption in the U.S. was 86 quadrillion BTUs. In a decade, it has grown to 100. That is an increase in energy equivalent of 8 million barrels of oil a day. Over the last two decades almost no new refinery capacity has been added. The ability to deliver imported oil has also diminished. World tanker fleets have declined. Prior to the 90's America increased its power grid capacity by 10% every five years. During the first half of the 90's that capacity had declined to only a 4% increase. In the last half of the decade it declined further to only a 2% increase. At the same time, the demand for electricity grew by 2.5-3% a year and over the last few years, it has accelerated to 4% a year.



During this same time, the supply of energy has declined. Within OPEC, only one country, Saudi Arabia, has excess supply. Decline rates in production in the U.S. in the lower 48 and in Alaska continue to fall. Despite increased investment, output fails to match input. Gas well completions are up in Canada by 41% over the last year, but gas supply grew by only 2%. In the U.S., drilling activity over the past five years has increased three-fold, but output remains flat. New finds are smaller while technology accelerates production decline curves.

Instead of facts, Americans are deluged with irrelevant environmental drivel from the media. The Jimmy Carter Sweater Strategy is proposed as a solution to the crisis. More efficient cars and refrigerators are proffered as answers to our energy needs. According to Matthew Simmons of Simmons International, the savings of increasing gas mileage to 80 miles per gallon in one million new cars would only save us 40,000 barrels of oil each day.³ Imagine how long it would take and what the costs would be if we converted our entire inventory of existing automobiles to more fuel-efficient cars. It would take over a decade. The idea that conservation will solve our energy crisis is as hollow as it is absurd.

Flaunting The Possible Solutions

Fixing the energy problem is simple. It involves rebuilding our energy infrastructure. It means finding new sources of oil and natural gas. It mandates using new alternate sources of energy such as clean coal technology, geothermal and nuclear power. It will involve building power plants, adding thousands of miles of pipelines, adding refineries, building tankers and adding capacity to our power grid system.

We have a problem in that this crisis hits our economy at a time of weakness and economic vulnerability. Instead of addressing the issue and turning it into an opportunity, rational debate has given way to demagoguery. The needs of plants, insects, fish and animals are placed above humans. Forests are being closed down. Loggers are losing their jobs. Mines are being closed and miners collect unemployment. Ranch lands and grazing rights are being taken away. Access to oil and natural gas on Federal lands is being denied to the energy industry. And now even lives are being threatened. Recently in the Pacific Northwest four firefighters lost their lives because of a fish!⁴ Many of these so-called threats to plants, fish and animals are questionable. There is a Pulitzer Prize waiting for the reporter who investigates the fraudulent arguments behind much of the environmental movement. I suspect that the reporter will find that political theory is taken as scientific fact.

The point to be made here is that energy is the lifeblood of our economic system. Without it, our economy shuts down. With it, our economic well-being is enhanced. The current crisis won't go away. It will only get worse. Unless we begin now to address the problem, the prospects for economic recovery will be limited. We will have to rely on the good fortune of weather, which we know is unpredictable. Unusually cool weather has helped California to avoid blackouts this summer, but California is only a few degrees away from its next energy crisis.

The problem of energy has all but disappeared from the front pages. An aberrantly cool summer has led to cutbacks on air-conditioning loads and we've seen the demand for energy dampened by a weak economy. The government has imposed price caps in California. Weather and the economy have been the main factors in reducing our power consumption. The result is that electricity prices have receded. Now there is talk of a power glut. A recent article in *Barron's* put forth that overbuilding by power producers could imperil the industry.⁵ I believe this issue of a power glut is short-sided and rests primarily on short-term pricing mechanisms.

Short-Term Thinking on a Long-Term Problem

So much of what happens in the financial markets and in corporate boardrooms is based on short-term thinking. Whether it is the current price of a stock or the current price of a commodity, too much emphasis is placed on short-term pricing mechanisms. Less than three months ago, the country was caught up with energy shortages. Now they are talking about an energy glut. Have the fundamentals changed that dramatically in so short a period that we have gone from shortage to surplus in just three months? A cooler summer and a slower economy doesn't erase the fact that our energy infrastructure continues to deteriorate.

There is no question that an economic slowdown has reduced demand for energy. However, the perception that reducing demand for energy through a weak economy is an answer to the energy crisis is misguided. Power consumption in the Pacific Northwest was reduced when the Bonneville Power Authority asked 10 aluminum smelters, representing 40 percent of the nation's aluminum production to shut down in order to reduce power. It is estimated that 7,000 workers will lose their jobs as a result.⁶ The shutdown will conserve energy at the expense of the economy. Surely, putting people out of work, and reducing economic output cannot represent a workable solution to a long-term problem. By this method of thinking, a recession or a depression would be even better since it would further reduce our energy needs. As absurd as this sounds, there are many in the environmental camp that indirectly argue for such an approach.

As far as the weather reducing demand, that can change at any moment. What happens if the weather this winter is also unseasonably cold? The reason prices spiked last winter was that capacity constraints existed within our energy infrastructure. If a refinery breaks down, if weather patterns change, or if demand heats up within the economy, the infrastructure still isn't there to handle it. This is why prices spike when demand increases. Our existing infrastructure is old and badly in need of repair. What happens to this infrastructure when the next economic up cycle begins? A weakening economy may reduce energy demands in the short-term, but it does not solve the energy crisis. It just postpones it.

Supply and Demand Numbers Don't Lie

As these graphs depict, our production of oil and gas has steadily declined over the last three decades. We are no longer energy independent. As our production has declined, our imports have increased. We are now heavily dependent on OPEC for much of our energy needs. If they want to cut back production to maintain prices, we are held hostage to their desire for higher prices. As oil production decline curves accelerate over the next decade, we will have to import even more oil from the Middle East. The price of oil will only go higher over the long term. When you are heavily dependent on outsourcing your energy needs, you are not in a position to dictate the price you pay. Over the next decade the U.S. will be faced with paying higher prices for energy either through market mechanisms because of supply constraints, through government price controls that create shortages, or by higher prices dictated by foreign producers who sit on top of the majority of the world's oil reserves.

One way or another, the price of energy will rise throughout this decade. How much it rises and what we do about it will determine the strength of any economic recovery or the severity of a decline. Cheap and abundant energy has been behind much of the progress that has been made in living standards over the last century. The real danger is that a recession will reduce energy demand short-term, but it will also accelerate the energy crisis and place a limit on any economic recovery. During a recession, we will still be consuming energy.

Figure 2-6
Dependence on Oil Imports Is Rising
(Millions of Barrels per Day)

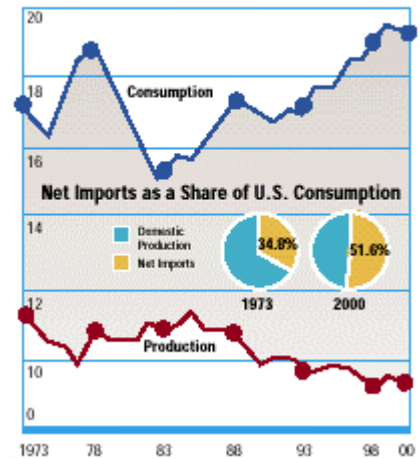


Figure 2-8
The U.S. Energy Trade Deficit Has Worsened
(Percent)



Our production of oil and natural gas will continue to decline. Our aging energy infrastructure will continue to decay. The depletion of our natural resources will continue unabated. The danger of a recession comes from short-term price decreases. Lower prices discourage the necessary investment that is going to be needed to repair and rebuild the whole energy complex. To maintain our standard of living in the United States, we must continuously expand our access to mineral resources and energy. As the U.S. becomes more dependent on importing these resources, our balance of payment problem worsens. The more dependent we become on importing these resources, the greater danger it poses to our standard of living. A nation, which does not control its natural resources, loses control over its economic future.

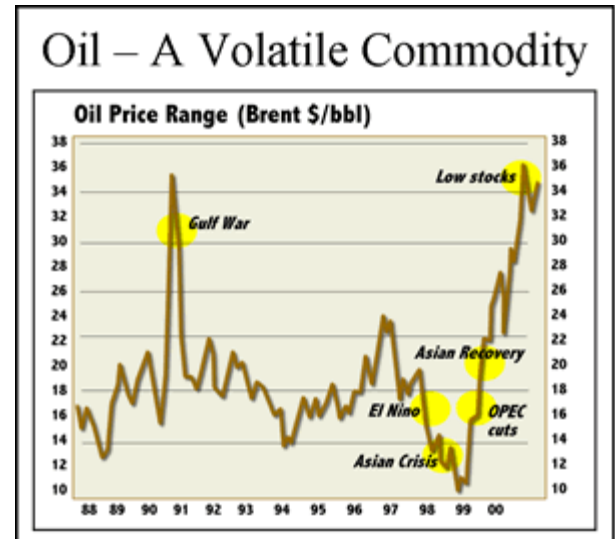
War – A Very Real & Present Danger

Right now that dependency is on Middle East oil. This is a very unstable region of the world. Placing so much emphasis on imported oil is inherently dangerous to our national security. The consequences of another Middle East War are inconceivable to most economists or analysts. If war breaks out, what would happen to our financial markets, to the price of energy, to our imports of oil from the region, and to our economy? Right now no one is paying attention to this possibility despite the international headlines of conflict. Wall Street glosses over the heightened tensions and the escalation of violence. It does so at its own peril. Analysts ignored these conflicts in the past. Then they were taken by surprise in 1967, again in 1973, again in 1979, and once again in 1990. As I have mentioned in past installments of my Storm Series, our only energy policy at the moment is 25 warships in the Persian Gulf.

Shortsighted and Apathetic Views Inhibit An Effective Energy Policy

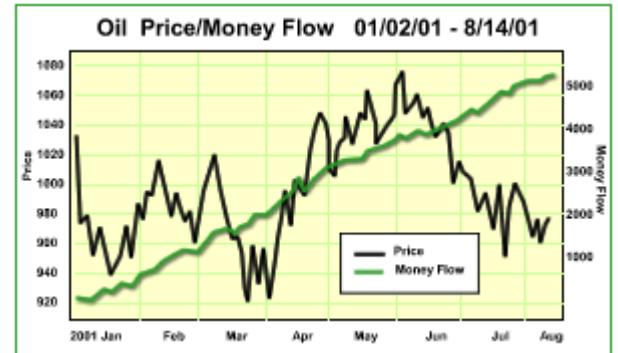
The real problem in looking at our energy crisis is that short-term pricing mechanisms have been allowed to dictate our energy policy. For almost two decades, low prices and low returns within the industry took their toll on oil producers and the whole energy complex. The result was industry consolidation that neither added to capacity nor repaired infrastructure. Lower prices fueled strong economic growth at the expense of the energy industry. From exploring for oil and natural gas, building power plants, laying pipelines, to building tankers and our power grid system, the whole system was ignored. Returns were so low that the industry didn't have the capital to modernize or expand and keep the industry healthy.

Another concern is the data on which energy decisions are being made is badly flawed and need of re-evaluation. Price has become everything. Price cannot tell you about the condition of our energy complex, the age of our tanker fleet, OPEC spare capacity, or production decline curves in the West. Price doesn't tell you that capacity constraints exist within the energy complex until severe weather places extra demand on the system. Only when prices rise do we pay attention. And even then, it is only briefly. Any time prices rise, we think they are an aberration or part of a conspiracy by the industry or some insider wanting to make an extra buck. When prices rise, the natural reaction by politicians and the media is to begin pointing fingers and find a villain. Rather than thinking the problem through, politicians only propose band-aids like price controls as a solution. It may mollify voter wrath, but it also gives false signals to consumers to continue their use of energy without regard to conservation and to oil producers who look to their bottom line.



Energy Will Be A Permanent Problem

This time around, our energy crisis is not temporary. It will become permanent unless we do something about it. Unless we solve it, our future prosperity and that of the world could become imperiled. We have been fortunate in the U.S. in that our excess demand for energy has been supplied by imports from OPEC and other foreign producers. This has come at the expense of a deteriorating trade deficit. However, a day is coming in the not too distant future when our voracious appetite for energy will compete against the demands from emerging world economies. The desire of growing populations in lesser-developed nations to maintain and increase their standard of living intensifies the demand on the world's mineral resources. The United States, with only 5% of the world's population, uses about a third of the globe's annual energy supplies. As we import more of our energy and raw materials (resources in which we were once self-sufficient), we will increasingly lose control over our future economic destiny. Many in the U.S. just don't get it. The era of cheap and abundant energy is gone.



Energy and minerals are the basis of our modern civilization. Without these resources, nations are doomed to remain at poverty levels. If denied access to supplies, countries will either resign themselves to a position of poverty or as in the case of Japan in 1941, go to war. With no new frontiers to explore, nations will continuously face conflicts and jostle for position for access to the earth's raw materials. Future military conflicts like the Gulf War and the current conflict in the Middle East will be over access to the earth's remaining resources of energy, water, fertile soil and other base minerals. It is for these reasons that we must begin now to solve this crisis. The severity of a recession, or the strength of a recovery, will depend on the job that is done.

I've identified three special situations that would argue against an economic recovery or against a recovery of any sufficient strength. I've discussed the ineffectiveness of monetary policy to arrest a market decline or stop the economy from weakening. I've shown that the tax bill lacks the necessary stimulus to ameliorate the downturn because of the phasing in of most of its benefits. I've discussed the danger of the energy crisis and how it has weakened the economy and what it portends for the future unless it is solved. The final situation that does not bode well for the economy or the financial markets is the condition of corporate profits. It is the sorry state of corporate profits that presents the most compelling argument against a return of the bull market of the 90's.