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1

General Link for Oil Prices

Even small energy policy changes can have a big effect on current oil prices

Feldstein, Economics Professor, Harvard, '8

[Martin, George F. Baker Professor of Economics, chairman of the Council of Economic Advisers under President Reagan, Member of The Wall Street Journal's board of contributors, Ph.D. from Oxford; President Emeritus, National Bureau of Economic Research; Member of the President's Economic Recovery Advisory Board 2009; Fellow of American Academy of Arts and Sciences since 1977; Author of more than 300 scientific papers and the author or editor of several books; "We Can Lower Oil Prices Now," *Wall Street Journal*, <u>http://online.wsj.com/article/SB121486800837317581.html?mod=googlenews_wsj</u> download date: 2-2-09]

Although most experts agree that financial speculation was not responsible for the surge in the global prices of food and energy, many people remain puzzled about the source of these remarkable price rises. Economics offers a simple supply-and-demand explanation and reason for optimism about the future of commodity prices. In the case of oil, economics also suggests how policy changes today that affect the future could quickly lower the current price of oil.

We all know that rising incomes in China, India and the Gulf states have increased the demand for oil and many other commodities. But how could the modest, one-year rise of these demands lead to 100% increases in the prices of oil and other commodities? Let's take a look first at perishable agricultural commodities. In the short run, there is little scope for increasing the supply of corn in response to a global increase in demand. For demand and supply to balance – for the market to clear – the price of corn must rise.

If the demand for corn were very price-sensitive, a relatively small increase in price would reduce global demand by enough to offset the initial rise in demand. However, since demand is actually quite insensitive to price in the short run, it takes a very large price rise to bring global demand into line with supply. Here is a simplified picture of what happened in the past year. The quantity of corn demanded by high-growth countries rose gradually, increasing eventually by an amount equal to, say, 10% of the previous total global level of corn consumption. Since the supply of corn did not increase, the price had to increase enough to reduce corn consumption in other countries by 10%. If it takes a 10% increase in the price to reduce the quantity of corn demanded in the first year by just 1%, it would take a 100% increase in the price of corn to offset the initial 10% rise in the quantity of corn demanded.

In reality, the picture is complicated by the substitution in both supply and demand among different agricultural commodities, and by the role of the corn ethanol program. But the basic explanation holds: With a very low short-run price sensitivity of demand and little scope to raise supply in the short run, even a relatively small increase in corn demand by the high-growth economies can lead to a very large short-run rise in the price of corn.

Fortunately, the price sensitivity of both demand and supply will increase with time. This implies that the rising demand from China and other countries may eventually be accommodated with a price lower than today's level.

The situation for oil is more complex, but the outcome for prices is potentially more favorable.

Unlike perishable agricultural products, oil can be stored in the ground. So when will an owner of oil reduce production or increase inventories instead of selling his oil and converting the proceeds into investible cash? A simplified answer is that he will keep the oil in the ground if its price is expected to rise faster than the interest rate that could be earned on the money obtained from selling

the oil. The actual price of oil may rise faster or slower than is expected, but the decision to sell (or hold) the oil depends on the expected price rise. There are of course considerations of risk, and of the impact of price changes on long-term consumer behavior, that complicate the oil owner's decision – and therefore the behavior of prices. The Organization of Petroleum Exporting Countries (the OPEC cartel), with its strong pricing power, still plays a role. But the fundamental insight is that owners of oil will adjust their production and inventories until the price of oil is expected to rise at the rate of interest, appropriately adjusted for risk. If the price of oil is expected to rise faster, they'll keep the oil in the ground. In contrast, if the price of oil is not expected to rise as fast as the rate of interest, the owners will extract more and invest the proceeds.

The relationship between future and current oil prices implies that an expected change in the future price of oil will have an immediate impact on the current price of oil.

Thus, when oil producers concluded that the demand for oil in China and some other countries will grow more rapidly in future years than they had previously expected, they inferred that the future price of oil would be higher than they had previously believed. They responded by reducing supply and raising the spot price enough to bring the expected price rise back to its initial rate.

Hence, with no change in the current demand for oil, the expectation of a greater future demand and a higher future price caused the current price to rise. Similarly, credible reports about the future decline of oil production in Russia and in Mexico implied a higher future global price of oil – and that also required an increase in the current oil price to maintain the initial expected rate of increase in the price of oil.

Once this relation is understood, it is easy to see how news stories, rumors and industry reports can cause substantial fluctuations in current prices – all without anything happening to current demand or supply.

Of course, a rise in the spot price of oil triggered by a change in expectations about future prices will cause a decline in the current quantity of oil that consumers demand. If current supply and demand were initially in balance, the OPEC countries and other oil producers would respond by reducing sales to bring supply into line with the temporary reduction in demand. A rise in the expected future demand for oil thus causes a current decline in the amount of oil being supplied. This is what happened as the Saudis and others cut supply in 2007.

Now here is the good news. <u>Any policy that causes the expected future oil price to fall can cause the current price to fall</u>, or to rise less than it would otherwise do. <u>In other words</u>, it is possible to bring down today's price of oil with policies that will have their physical impact on oil demand or supply only in the future.

For example, increases in government subsidies to develop technology that will make future cars more efficient, or tighter standards that gradually improve the gas mileage of the stock of cars, would lower the future demand for oil and therefore the price of oil today.

Similarly, increasing the expected future supply of oil would also reduce today's price. That fall in the current price would induce an immediate rise in oil consumption that would be matched by an increase in supply from the OPEC producers and others with some current excess capacity or available inventories. Any steps that can be taken now to increase the future supply of oil, or reduce the future demand for oil in the U.S. or elsewhere, can therefore lead both to lower prices and increased consumption today.

Perception Key

Perception key – governments are watching carefully

Roberts '4

[Paul, Energy and Economics Writer for Harpers, The End of Oil, pages 93-94]

So embedded has oil become in today's political and economic spheres that the big industrial governments now watch the oil markets as closely as they once watched the spread of communism — and with good reason: six of the last seven global recessions have been preceded by spikes in the price of oil, and fear is growing among economists and policymakers that, in today's growth-dependent, energy-intensive global economy, oil price volatility itself may eventually pose more risk to prosperity and stability and simple survival than terrorism or even war. In this bleak context, it becomes easier to understand why nations as powerful and technologically advanced as Japan, Britain, and the United States have such abysmal records when it comes to long-term energy planning or alternative energy. Indeed, when the major nations speak of energy policy today, about energy for the future, or about the much-touted energy security," they are not talking about depletion curves, or fuel cells, or a hydrogen economy. They are not talking about fuel efficiency, or solar power, or any of the potentially significant but speculative sources of energy. Rather, when nations discuss energy security today, what they are really talking about is the geopolitics of energy — and specifically, the actions, money, and alliances necessary to keep oil flowing steadily and cheaply through the next fiscal quarter.

Perception Key

Perception and Psychology determine oil prices – shifts can be quick and large

Schoen '08

[John W., Senior Producer at MSNBC, "Oil price spike has wide economic impact," <u>www.msnbc.msn.com/id/24778287/</u> download date: 7-2-08]

So far, there seems to be enough oil and gasoline to go around: Refineries are still adequately supplied with crude, and <u>gas stations aren't</u> running out of fuel. Prices are surging as traders see an increased risk of that happening. But that so-called panic buying could quickly reverse, sending oil prices sharply lower.

"This is all about psychology, and we are not very good at oil companies about forecasting the psychology of prices," Jeroen van der Veer, CEO of global giant Royal Dutch/Shell, said on CNBC Thursday. "So we'd better prepare ourselves for more volatility because if this is psychology, it can change very quickly."

<u>High Prices Inevitable – Frontline</u>

1. High oil prices are inevitable - Chinese and Indian demand

Associated Press '8

[Associated Press, July 6, "OPEC chief: Strong demand will keep oil prices up," L/N]

OPEC chief Chakib Khelil says the world's surging oil prices are not likely to fall.

He says strong market demand, especially from China and India, is one reason prices will stay as high as they are. But Khelil told a conference on energy in Algiers on Sunday that the steady increases of late "have nothing to do with supply and demand." Khelil, who serves as Algeria's energy minister, blames the rise on the weak U.S. dollar, the currency that oil is sold in.

High Prices Inevitable – Frontline

2. Oil producers will keep prices high regardless - more supply won't depress prices

Kingsdale '07

[Jim, Investment Manager since 1989, prior to which he was a cable television executive and entrepreneur. A graduate of Dartmouth and Harvard Business School, he started Energy Investment Strategies in 2007, "Fundamentals Suggest Oil's Headed Much Higher," December 30, <u>http://seekingalpha.com/article/58567-what-the-fundamentals-say-about-future-oil-prices</u> download date: 9-7-08]

All this looks right on paper and it may well happen, but I wouldn't bet on it. I would bet that if prices do fall sometime soon, maybe after the peak winter demand season, exporters will cut back fairly quickly to try to keep the price above \$80 or so. Further, when prices eventually begin to rise again, perhaps in the Spring or Fall of 2008, exporters will then be slow to raise production, having just experienced lower prices. So I think a possible reduction in the oil price next year would be shallow and would likely be followed by a counter trend leg up that will probably bring the price well above \$100. My thesis is based in part on the hoarding mindset that now dominates the oil market and is hardly ever discussed. Exporters (read OPEC, particularly KSA, UAE, Kuwait, and Venezuela) are now addicted to high and rising oil prices. Their ever increasing cash flows from oil have led to their making huge future capital commitments; they are not willing to see falling oil prices endanger those commitments. They also know that due to tight global supplies relatively minor production cuts are sufficient to raise prices. Finally they now believe that oil in the out years will only get more expensive. Thus near term production cuts will also be rewarded because the oil not sold now can be sold later for more money. In summary, exporters today have their hands on a hair-trigger for raising the oil price and they will not hesitate to pull it if the price falls much below \$85. I summarize this series of attitudes on the part of oil exporters as the "hoarding mindset." Meanwhile global oil production is now at an historically high level but still does not seem to be able to satisfy demand. The Saudis and the Iraqis have both managed to increase production by roughly 500,000 b/d helping to cause the 85 mb/d global production plateau that has existed for nearly two years to be eclipsed during the past few months; production now seems to be running in excess of 87 mb/d as shown in this chart: Yet the price of oil refuses to sink. Each time oil goes into the high \$80s it seems to bounce right back in the face of tight inventories. U.S. crude oil inventories keep sinking - they are now the lowest in nearly three years. This is a chart that indicates the tightness of U.S. oil supplies measured in days of inventory:

<u>High Prices Inevitable – Frontline</u>

3. Peak means oil prices will never fall significantly

Financial Times '8

["Peak No Evil," January 3, 2008. <u>http://www.ft.com/cms/s/1/7e1b5d1e-b99e-11dc-bb66-0000779fd2ac.html</u> download date: 9-30-08]

As millenarian prophecies go, "the peak is nigh" does not pack the same doom-laden punch as a promised "end". Except, that is, in oil circles. <u>Oil resources are</u> finite. "Peak oil" theorists posit that about half of all the world's crude has been used and that output will soon peak prior to an irreversible decline. Such thinking has helped propel crude to the \$100 per barrel level it touched yesterday. Conventional oil fields are like champagne bottles: once "opened", pressure forces out some of the contents. Eventually field pressure drops and, barring using such techniques as re-injecting gas, output inevitably declines. Back in the 1950s, Marion King <u>Hubbert, a US geoscientist, correctly forecast - to within a few years - when output in the US's lower 48 states would peak (it was 1970)</u>. The "Hubbert curve" is a totem of peak oil theorists.

High Prices Inevitable Extension off #1: Foreign Country Demand

Chinese and Indian demand will continue to drive up global oil prices

New York Times. '7

[by Jad Mouawad, "Rising Demand For Oil Provokes New Energy Crisis." The New York Times. November 9, 2007. http://www.nytimes.com/2007/11/09/business/worldbusiness/09oil.html? r=1&oref=slogin&pagewanted=print download date: 11-3-08]

With oil prices approaching the symbolic threshold of \$100 a barrel, the world is headed toward its third energy shock in a generation. But today's surge is fundamentally different from the previous oil crises, with broad and longer-lasting global implications. Just as in the energy crises of the 1970s and '80s, today's high prices are causing anxiety and pain for consumers, and igniting wider fears about the impact on the economy. <u>Unlike past oil shocks, which were caused by sudden interruptions</u> in exports from the Middle East, <u>this time prices</u> have been rising steadily as demand for gasoline grows in developed countries, as hundreds of millions of Chinese and Indians climb out of poverty and as other developing economies grow at a sizzling pace. "This is the world's first demand-led energy shock," said Lawrence Goldstein, <u>an economist at the Energy Policy Research Foundation</u> of Washington. Forecasts of future oil prices range widely. Some analysts see them falling next year to \$75, or even lower, while a few project \$120 oil. <u>Virtually no one foresees a return to the \$20 oil of a decade ago, meaning consumers should brace for an era of significantly higher fuel costs. At the root of the stunning rise in the price of oil, up 56 percent this year and 365 percent in a decade, <u>is a positive development: an unprecedented boom in the world economy. Demand from China and India alone is expected to double in the next two decades as their economies continue to expand, with people there buying more cars and moving to cities to seek a way of life long taken for granted in the West.</u></u>

High Prices Inevitable

Extension off #1: Foreign Country Demand

Other countries driving prices – US consumption is already down

Detroit Free Press '8

["What's driving oil prices" July 6, 2008, L/N]

Worldwide demand: This, of course, is the biggie -- the centerpiece of all free market economic debates. And <u>there are certainly</u> indications that demand -- particularly with China and India ramping up their industrial might -- is increasing worldwide. Problem is, consumption is actually down in the United States, and an economic slowdown affecting nations around the world should be reducing demand, bringing down prices. That is not happening.

Renewables Shift - Link

Lower oil prices would stop a shift to renewable energy surge

Washington Times 2-24-09

["Low oil prices seen stalling clean energy," by Tom LoBianco, http://www.washingtontimes.com/news/2009/feb/24/low-oil-prices-seen-stalling-clean-energy/ download date: 2-24-09]

Former President Bill <u>Clinton and</u> former Vice President Al <u>Gore warned</u> Monday <u>against letting low oil prices lure</u> consumers back into gas-guzzling cars, thereby stalling efforts to develop clean energy sources.

Mr. Gore warned that the country's "political will" to invest in renewable energy projects and break its

dependence on oil has waxed and waned as the price of oil has fluctuated over the decades.

"We need to get the market to work for us by putting a price on carbon," Mr. Gore said.

Mr. <u>Clinton said that his home state of Arkansas' attempts to cut back on using fossil fuels routinely have been</u> stymied when the price of oil dropped.

"Every time oil dropped, people said give me my Hummer back," the former president said.

The price of oil peaked at around \$147 a barrel last year, pushing the price of a gallon of gas to more than \$4 across the nation, but fell sharply as the global economy tanked dropping to just more than \$30 a barrel.

Lawmakers, environmentalists and energy experts have generally stated that the volatility of oil prices has made it hard to develop a national energy strategy which reduces carbon-dioxide emissions and fortifies national security.

Some energy analysts have proposed establishing a price floor for oil through a government tax, but the concept has been given little credence on Capitol Hill. President Obama's transportation secretary, Ray LaHood, floated the idea of changing how the gas tax was administered last week, but was quickly shot down by the White House.

Mr. Clinton and Mr. Gore talked during an expansive conference hosted by the Center for American Progress Action Fund and focused on how to reduce the nation's dependence on oil, invest in renewable energy sources and build out an expansive "smart" energy grid.

Renewables Shift - Link

High energy prices boost renewables

Braml, German Council on Foreign Relations, '7

[Josef Braml, Editor-in-chief of the Yearbook on International Relations at the German Council on Foreign Relations (DGAP) in Berlin, "Can the United States Shed Its Oil Addiction?" *The Washington Quarterly*, 30:4 pages 117–130]

In the long run, however, U.S. markets may adapt to these challenges. <u>Higher energy prices will provide strong market incentives to</u> <u>find alternative sources of energy, to develop new technologies</u>, and to improve energy efficiency. For these effects, <u>there is an</u> <u>additional driving force: increasing public concern about environmental damage caused by traditional forms of energy</u> <u>consumption</u>.

Renewables Shift - Link

Empirically lower oil prices slash renewable development

Bryce '7

[Robert Bryce lives in Austin, Texas and managing editor of Energy Tribune. He is the author of *Cronies: Oil, the Bushes*, and *the Rise of Texas, America's Superstate*. Petroleumworld does not necessarily share these views. "The Politics of Cheap Oil," *Petroleumworld News* 01/28/07, Editor's Note: This commentary was originally published by CounterPunch, January 17, 2007. Petroleumworld reprint this article in the interest of our readers. http://www.petroleumworld.com/SF07012801.htm download date: 9-8-08]

Cheap crude will short-circuit the push for renewable energy. We've seen this before. The surge in oil prices that occurred after the 1973 oil embargo didn't last. As prices softened, so, too, did the interest in solar power, wind power and other technologies. The best hope for the renewable energy sector is a sustained period of high prices for fossil fuels of all types, from coal to natural gas.

Low-cost oil would increase emissions of greenhouse gases. One can argue all day about what's causing global warming. But if policymakers want to embrace Kyoto or other anti-warming initiatives, cheap oil is the last thing they should want.

Renewables Shift - Impact

Shift to renewables or extinction

Reynolds '3

[James Reynolds, June 18, 2003 "EARTH 'IS HEADING FOR MASS EXTINCTION IN JUST A CENTURY", The Scotsman, L/N]

THE worst mass extinction in the history of the planet could be replicated in as little as a century if global warming continues, according to new evidence. Researchers at Bristol University have discovered that a six-degree increase in the global temperature was enough to annihilate up to 95 per cent of species which were alive on Earth at the end of the Permian period, 251 million years ago. Up to six degrees of warming is now predicted for the next century by United Nations scientists from the Intergovernmental Panel on Climate Change (IPCC) if nothing is done about emissions of the greenhouse gases, principally carbon dioxide, which cause global warming. The end-Permian mass extinction is now thought to have been caused by gigantic volcanic eruptions, which triggered a "runaway greenhouse effect" and nearly put an end to life on Earth. Conditions in what geologists have termed this "post-apocalyptic greenhouse" were so severe that only one large land animal was left alive, and it took 100 million years for species diversity to return to former levels. The new finding is revealed in a book by Professor Michael Benton, the head of Earth sciences at Bristol University. Prof Benton said: "The end-Permian crisis nearly marked the end of life. It's estimated that fewer than one in ten species survived. "Geologists are only now coming to appreciate the severity of this global catastrophe and to understand how and why so many species died out so quickly." Tropical latitudes were the first areas of the Earth to feel the effect of the warming, and loss of species diversity spread out from there. Reduction of vegetation, soil erosion and the effects of massively increased rainfall wiped out the lush diverse habitats of the tropics, which would today lead to the loss of animals such as hippos, elephants and all of the primates, according to Prof Benton. He added: "The end-Permian extinction event is a good model for what might happen in the future because it was fairly non-specific. "The sequence of what happened then is different from today because then the carbon dioxide came from massive volcanic eruptions, whereas today it is coming from industrial activity. However, it doesn't matter where this gas comes from; the fact is that if it is pumped into the atmosphere in high volumes, then that gives us the greenhouse effect and leads to the warming with all the other consequences." Modern predictions of the apocalyptic consequences of global warming and climate change due to increases in carbon dioxide first began to circulate in the early 1980s. Carbon dioxide is, like oxygen, translucent to sunlight but opaque to infra -red radiation. After the sun's rays have warmed the Earth and sea, the heat produced can therefore not be re-radiated back into space. When the industrial revolution began about 200 years ago, there were roughly 280 parts per million (ppm) of carbon dioxide in the atmosphere. Today, there are 350ppm. More carbon dioxide is being pumped into the atmosphere as the human population grows and turns to heavy industry, and less is being removed by the rest of nature because, possibly due to human activity, global vegetation which removes the damaging gas is in retreat. In the mid-1980s, scientists first started to predict that temperatures would increase somewhere in the order of between four and six degrees by 2080. Sea levels were also predicted to rise 20cm by 2030, and 45cm by 2070. In the light of modern records, these estimates were a little overstated. Dr Ian Brown, a senior researcher with the Tyndall Climate Research Centre at the University of East Anglia, said: "More or less every year now we have a temperature which is higher than the previous year and the Met Office has predicted this year that there is a 50 per cent chance it will be the warmest on record. "Each year is now pretty much an exceptional one by previous standards. "Sea-level rise is more complicated because we have a shorter record. At the moment, in global terms, it is probably in the order of about one and a half millimetres per year. "By the end of the century, the rise in sea level could then be a lot more than five or even ten centimetres. "Certainly in the past two decades we have now recorded rises in sea levels in the region of one or two millimetres a year which are measured by tide gauges at various sites. "These instruments are quite precise and show that predictions of the consequences of global warming are certainly observable." He added: "Much land has in the past been reclaimed from the sea, such as in the Forth estuary, and those areas are now looking increasingly vulnerable." Climate experts and environmentalists said yesterday they were appalled that a disaster of such magnitude could be repeated within this century because of human activities. Mark Lynas, an author who has written extensively on global warming and recently travelled around the world cataloguing impacts of climate change, said the findings must be a wake-up call for politicians and citizens alike. "This is a global emergency," he said. "We are heading for disaster and yet the world is still on fossil fuel autopilot. There needs to be an immediate phase-out of coal, oil and gas, and a phase-in of clean energy sources. "People can no longer ignore this looming catastrophe."

Renewables Shift – Uniqueness

Renewables Increasing Now

New investment in renewable energy is increasing and the industry is maturing because of high prices

Thai Press Reports '8

[July 4, 2008 HEADLINE: THAILAND WORLD BANK SUPPORTS CARBON-FINANCE PROJECT IN CHON BURI'S KOH SICHANG DISTRICT, L/N]

<u>A</u> UN Environment Programme (<u>UNEP</u>) study <u>has shown that new investment in clean energy across the world last year topped \$148US</u> <u>billion</u> (Bt5 trillion), <u>a</u> 60-per-cent increase from 2006, as renewables and energy efficiency attract fast-growing interest. Growth <u>continues this year on climate-change worries, growing support from world governments, rising oil prices</u> and ongoing energy security concerns.

"<u>The clean-energy industry is maturing and its backers remain bullish</u>. These findings should empower governments - both North and South - to reach a deep and meaningful new agreement by the crucial climate convention meeting in Copenhagen in late 2009," <u>said</u> Achim Steiner, <u>the head of the UNEP</u>.

High prices spur clean energy and less oil use worldwide

Hunter, Senior Fellow, Hudson Institute, '08

[Rod, also former senior director at the National Security Council under President George W. Bush responsible for international economics, "Opinion: The Market Is Responding to the Oil Shock," July 8, Wall Street Journal http://online.wsj.com/article/SB121547405022734039.html?mod=opinion_main_commentaries download date: 9-8-08]

The leaders of the G-8 and of major developing countries will discuss how to respond to energy security and climate change tomorrow. Their first instinct will likely be to propose new regulations. Yet <u>market forces may already be solving these problems, as high oil prices drive a shift away from the polluting, petroleum-fueled internal combustion engine to cleaner forms of transportation</u>. That's a change worth cheering, even if oil prices are painful in the meantime. Oil is the United States' principal transportation fuel, and the source of a third of the country's greenhouse gas emissions. Other major countries are similarly dependent on oil for transportation. <u>As prices have risen, worries about energy security and long-term climate</u> effects have reached a fever pitch.

<u>History teaches that innovation directed by markets can solve problems such as these</u>. In New York at the end of the 19th century, horses were the main form of transport – and a major source of pollution. As many as 200,000 horses each produced 15 to 35 pounds of manure per day. Manure piles along the roads and in stables produced vast numbers of flies, an important vector for infectious diseases such as typhoid fever. Horses became increasingly expensive, thanks to rising prices for hay, oats and the urban land required for stables.

<u>Initially the automobile wasn't much competition for the horse. Then</u>, around the turn of the century, <u>a series of innovations</u> involving the internal combustion engine and manufacturing (mass production, assembly lines and interchangeable parts) <u>improved performance, reliability and costs</u>. <u>As car prices fell, the horse, the manure and the "typhus fly" were done for. The same thing may be happening today</u>. This March, American entrepreneur Elon Musk started production of his electric sports car, the Tesla. This car accelerates from 0 to 60 miles per hour in four seconds, tops out at 125 mph, and has a range of 220 miles. The \$110,000 price tag limits the Tesla to the wealthy, but mass-production models are in the works. General Motors has committed itself to rolling out its electronic vehicle, the Volt, by 2010. Toyota plans a successor to its popular Prius hybrid. Recent cost comparisons by

Deutsche Bank's auto analysts suggest electric cars will be cheaper to operate than conventional vehicles. Fuel costs per mile for gasoline-fueled cars are \$0.27 in Germany, \$0.24 in Britain, \$0.17 in Brazil and \$0.11 in the U.S., with differences driven by local fuel taxes. For electric vehicles, the cost per mile is a mere \$0.02. Adding in a battery amortized over the life of the car, the cost is still only \$0.10. Batteries will be expensive, at least in early years, but electric cars won't need costly engines or complex transmissions like today's autos.

<u>Cost differentials like those could drive a quick transition to energy-efficient forms of transportation</u>. There would surely be failures along the way – even Henry Ford had a couple of flops and an encounter with bankruptcy before making it big with the Model T. And it would take a while to replace the existing transportation fleet made up of cars that last 15 years.

Nonetheless, incremental effects on oil demand could be powerful. <u>Developed countries would grow less dependent on oil producers, and</u> <u>transportation-related greenhouse gas emissions could ease</u> (even coal-fired power plants are better than millions of gasoline-powered autos). <u>As</u> <u>costs fall, electric vehicles could be adopted in developing countries, amplifying energy security and climate benefits.</u> The transition would reduce the world's dependence on regimes run by thugs and theorats. More than 80% of proven reserves are controlled by national oil companies and Russian firms, which don't operate like normal profit-maximizing businesses. (Witness Russian threats to turn off gas supplies to Ukraine and

companies and Russian firms, which don't operate like normal profit-maximizing businesses. (Witness Russian threats to turn off gas supplies to Ukraine and Eastern Europe.) High oil prices have corrupted countries with weak institutions and reinforced misbehavior of international miscreants such as Iran and Venezuela.

Regulation and taxes can of course shape market incentives. But regulation comes with unintended consequences – the more complex the regulation (think capand-trade), the more scope for undesired consequences. <u>High oil prices</u>, as unpleasant as they are, are making a lot of alternative energy and transportation technologies look attractive. The petroleum-powered auto has provided affordable independence to millions for a century, but has brought its own problems. Innovation and markets could well send the internal combustion engine and its oilrelated worries the way of the horse and buggy.

<u>Renewables Shift – Link</u> High Oil Prices

High Oil prices spur alternative energy and less use of oil

Yetiv, Professor of political science and international studies, Old Dominion, 106

[Steve A., "OPINION: America benefits from high oil prices," The San Diego Union-Tribune, February 6, L/N]

From Wall Street to Main Street, people hate high oil prices because they cause economic pain. But like coffee, red wine, and perhaps even chocolate, high oil prices can do some good too. Current energy legislation, which was passed by Congress and signed by President Bush in August 2005, moved America in the right direction, but it has a core weakness. This legislation, like President Bush's vision of oil independence laid out in his recent State of the Union speech, fails to do what higher oil prices can accomplish: decrease oil consumption in the transportation sector where 70 percent of oil is used and diminish our dependence on foreign oil. Current energy legislation, and President Bush's vision, does encourage power sources such as nuclear, coal, solar and wind. But, with the potential partial exception of solar power, they can't run vehicles. Astonishingly, less than one-eighth of that \$14.6 billion in energy legislation actually decreased oil use in transportation.

In particular, what can high oil prices do that America's energy policy fails to do? First, sooner or later, <u>high oil prices spur the development of</u> <u>alternative energy resources because they make it more profitable to produce them. The higher prices go, the more entrepreneurs and companies</u> <u>around the world work to move us beyond the hazardous petroleum era.</u> Second, <u>the higher oil prices go, the more likely automakers will mass-</u> <u>produce more efficient, less pricey vehicles. That is precisely what we need to shift the current oil-guzzling paradigm.</u> A joint report by the Transportation Research Institute's Office for the Study of Automotive Transportation at the University of Michigan and the Natural Resources Defense Council shows that higher oil prices will hurt America's top automakers by decreasing sales of SUVs and pickup trucks. The report calls on them to make fuel efficient vehicles their top priority to better the country and their bottom line.

Most automakers are experimenting with fuel cell vehicles that run on hydrogen rather than oil. They are also selling 2005 hybrid vehicles that run on an internal combustion engine, as do conventional cars, plus an electric motor. Depending on the car, they yield between 10 percent and 50 percent better gas mileage than regular vehicles, and far better mileage than the ubiquitous SUV. But hybrids represent a drop in the market bucket, because automakers have so far made their profits by mass-producing less efficient, money-making vehicles. And fuel cell vehicles aren't expected to reach the market until 2010. <u>High oil prices are an incentive for making efficient vehicles on a mass, affordable scale, and sooner rather than later.</u>

Third, high oil prices make consumers less likely to waste gas and more likely to buy hybrids. In Europe, high gas prices -- roughly double that in the United States -- have led to mass adoption of hybrids. Investment banking firm Goldman Sachs predicts that gas prices would have to hit \$4.30 a gallon in the United States to change the gas-guzzling culture. But it is better to see the impact as relative to price. Fourth, <u>high oil prices benefit the environment</u>. Indeed, one study has shown that a broad energy tax on carbon content in fuels would reduce oil use and carbon emissions by over 10 percent. For that matter, vehicles that run on fuel cells emit only water and heat as waste, and hybrids emit more limited emissions than conventional vehicles. <u>Since carbon emissions cause global warming</u> -- a scientific fact rather than science fiction -- <u>we should tip our hats to high oil prices</u>, in this respect. Fifth, high oil prices are raising consciousness about the hazards of the oil era. Ninety-three percent of Americans believe that oil dependence is a serious problem. Although they still act like oil is an entitlement, pricey oil may lead them eventually to put pressure on politicians to move toward greater oil independence, as reflected perhaps in President Bush's speech. Of course, <u>higher oil prices are painful</u>. But, over time they can serve the environment, decrease our dependence on Middle East oil, especially from countries like Iran which uses oil money to build nuclear capability <u>and force us to take actions that make us less vulnerable when oil starts to dwindle in the future</u>.

<u>Renewables Shift – Link</u> High Oil Prices

High oil prices supercharge initiatives for renewable energy

Woods '8

[Richard Woods July 6, 2008 The Sunday Times (London) HEADLINE: How China's thirst for oil can save the planet, L/N]

These days even diehard petrol-heads know that in the long run there is no choice but to find an alternative to the black gold that has lubricated the world for more than a century. All sorts of initiatives for clean, green and renewable energy are being supercharged by oil prices that hit a new record last week of \$146 a barrel - and may well go higher.

Renewables Shift – Link

High Oil Prices

Low oil prices undercut investments in renewables

Maugeri '3

[Leonardo Maugeri, ENI SPA's senior vice-president of corporate strategies and international relations, senior fellow at the World Economic Laboratory at MIT, a senior fellow at the Foreign Policy Association, and a member of the executive council of the Center for Social Investment Studies, degree in petroleum economics and a PhD in international political economy, 12/15/2003, Oil & Gas Journal]

Hysteria aside, cheap oil has always been and remains a curse for industrialized countries and the most elusive enemy of oil security. It hampers any possibility of dealing with new energy alternatives to oil -- which are all very expensive -- or with the development of new oil regions. It maintains Western habits -- and particular those of the US -- of not promoting any form of energy-saving. Finally, it increases consumer dependence on a limited group of countries with the lowest production costs, which today still are those in the Persian Gulf. However, cheap oil is a curse for them too.

Renewables Shift – Link Booster

Renewable companies live on the margins - even small price changes could wipe them out

Smart Money '7

[By Rob Wherry, Smart Money is an investment website and a joint venture between Dow Jones & Company, Inc. and Hearst SM Partnership,"Alternative-Energy Funds Could Offer High-Powered Returns," June 21, http://www.smartmoney.com/fundinsight/index.cfm?story=20070621&hpadref=1%29 download date: 9-8-08]

Wind power and other forms of alternative energy — solar, hydro, geothermal, biomass — are quickly coming into vogue across the globe thanks to record high oil prices, shrinking reserves and world-wide demand that is expected to increase 50% by 2030, according to the International Energy Agency. What has also given them some attention is that these sources are now at the heart of profitable businesses. That hasn't always been the case. Clean Edge, an industry research firm, anticipates biofuels, wind, solar and fuel cells will generate \$217 billion in industry wide revenues by 2016, up from \$56 billion in 2006. Even the typical American has changed his perception: <u>A</u> survey by Calvert, a socially-responsible investment firm, found that 85% of the 1,094 people that they polled thought putting money into alternative energy was a good way to protect the environment and make money, too. Add all that up and you have a decent investing opportunity. You could spend your time reading over analyst reports on alternative-energy companies — what little there are on these thinly-traded firms — looking for a diamond in the rough. But a smarter option is to scoop up the shares of one of the growing number of mutual and exchange-traded funds that specialize in this field. As always, though, be prepared for sector funds like these to experience dramatic ups and downs. And we would suggest only building a 5% or smaller position in this niche. The concerns here are numerous. Many alternative-energy companies are small firms that are barely profitable. Lose a few customers or fail to make a piece of technology work and it could be lights out. Alternative-energy investors not only need to be aware of the price of a commodity like oil — the higher it goes the more attractive managing solar and wind farms becomes — but also others like corn, a chief ingredient in ethanol.

1. Shift is not dependent on high oil prices

Environment News Service '7

["Investors Pour Unprecedented Billions Into Renewable Energy," June 21, 2007, <u>http://www.ens-newswire.com/ens/jun2007/2007-06-21-04.asp</u> download date: 2-11-09]

Investment capital flowing into renewable energies such as wind power climbed from \$80 billion in 2005 to a record \$100 billion in 2006, <u>according to a new report from the UN Environment Programme</u>, UNEP. The trend analysis cites climate change concerns, increasing government support, and high oil prices as reasons for the boom.

The trend continues in 2007 with experts predicting investments of \$85 billion this year. "The renewable energy sector's growth "although still volatile ... is showing no sign of abating," the report states.

While the report finds that high oil prices have driven investors into the renewable energy market, UNEP Executive Director Achim Steiner says many investors are choosing renewables regardless of oil prices.

"One of the new and fundamental messages of this report is that <u>renewable energies are no longer subject to the vagaries of rising and</u> <u>falling oil prices - they are becoming generating systems of choice</u> for increasing numbers of power companies, communities and countries <u>irrespective of the costs of fossil fuels</u>, said UNEP Executive Director Achim Steiner, introducing the report Wednesday. While renewables today are only two percent of the installed power mix, they now account for about 18 percent of world investment in power generation, with wind generation at the investment forefront.

Solar and biofuel energy technologies grew even more quickly than wind, but from a smaller base.

Investors put \$71 billion into companies and new sector opportunities in 2006, a 43 percent jump from 2005 - and up 158 percent over the last two years.

In addition, about \$30 billion entered the sector in 2006 via mergers and acquisitions, leveraged buyouts and asset refinancing. This buy-out activity, rewarding the sector's pioneers, implies deeper, more liquid markets and is helping the sector shed its niche image, finds the report. The report covers both industrialized countries that are members of the Organization for Economic Cooperation and Development, OECD, and developing countries.

"This is no longer an industry solely dominated by developed country industries," Steiner said. "Close to 10 percent of investments are in China with around a fifth in total in the developing world."

2. No internal link – slow conversion rate and economic decline will block any shift

Goodstein, Physics Professor, Cal Tech, '04

[David, Ph.D. in Physics from Washington, Out of Gas: The End of the Age of Oil, page 32]

Once past Hubbert's peak, as the gap between rising demand and falling supply grows, <u>the rising price of oil may make</u> those alternative fuels economically competitive, but even if they are net energy positive, it may not prove possible to get them into production fast enough to fill the growing gap. That's called the rate-of-conversion problem. Worse, the economic damage done by rapidly rising oil prices may undermine our ability to mount the huge industrial effort needed to get the new fuels into action.

3. US concern over Iran drives renewable development - price not key

Luft, Executive Director, Institute for the Analysis of Global Security, '7

[Gal, Ph.D. in strategic studies, Paul H. Nitze School of Advanced International Studies (SAIS) at Johns Hopkins University. "Iran's Oil Industry: A House of Cards?" July 5, 2007, Institute for the Analysis of Global Security, The Institute for the Analysis of Global Security is a non-profit public educational organization focusing on energy security. IAGS seeks to promote public awareness to the strong impact energy has on our economy and security and to the myriad of technological and policy solutions that could help us move into an era of enhanced energy security, and increase peace, prosperity and stability in the world. <u>http://www.iags.org/n050707.htm</u> download date: 2-21-09]

Many opponents of an aggressive economic assault against Iran assert that efforts to cut off Iran's oil exports will disrupt global markets, cause a spike in oil prices, and hurt Western consumers. Accordingly, in December 2006, the U.N. Security Council voted to only issue limited economic sanctions against Iran, but not its energy sector.

Considering the long-term risks associated with a nuclear Iran, higher prices at the gas pump should not drive any Western country's Iran policy. No doubt, if Iran's production falls, due to investors' departure or a calculated decision by Iran to use the oil weapon and cut its production, there will be economic fallout. However, Iran will be the main casualty of any disruption. Additionally, in recent years, the U.S. economy has shown remarkable resiliency in the face of mounting oil prices and can withstand even higher prices. There is also a safety net in place. Most major oil consuming countries maintain massive strategic petroleum reserves in the event of a drop in supply. The U.S. alone has some 700 million barrels of oil in reserve – two years worth of Iranian exports.

To insulate the U.S. further, President Bush seeks to double the size of the American oil reserve in the coming years. The President also seeks to reduce America's oil dependence through increased efficiency and to shift to alternative fuels. Applied in unison, these tactics advance the strategic goals of reducing global energy prices, protecting the West against supply disruptions, and limiting the flow of petrodollars to Tehran. This increased pressure on the Iranian regime could, over time, generate a much desired regime change. If Washington executes this strategy with expediency and determination, this outcome could be achieved before Iran becomes a nuclear power.

Extension off #1: Not dependent on prices

Empirically, prices do not spur a shift

Bremmer, President, Eurasia Group, '05

[Ian, President of the Eurasia Group and a senior fellow at the World Policy Institute. Ph.D. in Political Science from Stanford. Prices transform oil into a weapon: Petroleum politics," August 27, International Herald Tribune, <u>http://www.iht.com/articles/2005/08/26/news/edbremmer.php</u> download date: 2-11-09]

Second, petro-states are rethinking their assumptions about the elasticity of global demand for oil. When oil sold for \$30 a barrel, they accepted the conventional view that substantial price hikes might lower demand - and hurt their bottom lines - as importing states actively looked for new sources of oil, energy alternatives and other ways to cut fossil-fuel consumption. <u>Now that oil sells for well above \$60 a barrel, without (so far) a sharp drop in demand, energy-exporting states are changing their minds. Some now believe they can push the price still further and increase profits without a <u>drop in demand</u>.</u>

Answer To: Renewables Shift Renewables Fail

The Renewables trend won't last long-term – multiple reasons

Roberts '04

[Paul, Writer for Harper's Magazine, The End of Oil, pages 201-202]

Other problems become more apparent when we look more closely at cost. Although wind and solar are getting cheaper, proponents often overlook the fact that their competitors are also getting cheaper and will continue to do so. Just as fuel cells must compete with a constantly improving internal-combustion engine, <u>wind and solar will have to battle with gas- and coal-fired technologies that will grow more efficient and less expensive and less polluting by the year. Renewables are also extremely vulnerable to energy price swings: if gas prices were to come down, for example, wind and solar power would lose much of their cost advantage. <u>Renewables are politically vulnerable, as well: if wind or solar were to lose their government subsidies, the current boom in new installations would come to a screeching halt: the mere threat of such a loss has many potential investors looking elsewhere.</u></u>

Answer To: Renewables Shift Renewables Fail

Renewables can't compete - scientific & economics facts doom them

Roberts '04

[Paul, Writer for Harper's Magazine, The End of Oil, pages 191-192]

But there are other reasons for the slow rise of alternative energy —reasons that go beyond the greed and duplicity of individuals or an entrenched system. For all their huge potential, most alternative technologies really aren't ready for prime time. Despite decades of (R&D) research and development — and despite recent growth rates that rival that of computers and cell phones — nearly every major alternative technology still suffers from serious engineering or economic drawbacks. Automotive fuel cells are still many times more expensive than even a vintage gasoline engine, and they may require decades of work to be competitive. Solar power, even after nearly thirty years and many billions of dollars in R & D, still costs five times as much as coal-fired power. Beyond questions of cost, these technologies may still face inherent limits in the quality of the energy they produce, and where and when they can be used, that could keep them from assuming a dominant share of the future energy mix.

Renewables Fail and Non-Unique

Renewables will not a significant energy source even with decades of government subsidies

Schleede, President, Energy Market and Policy Analysis '02

[Glenn, July 16, 2002, Federal Document Clearinghouse Congressional Testimony, L/N]

Renewables. Many people like the sound of getting energy from "renewable" energy but, again, it is necessary to be realistic and look at the facts. a. Hydropower is the only significant source of economical renewable energy. Advocates of "renewable" energy do not like hydropower despite the fact that it is the one "renewable" energy source that is providing a significant contribution; in fact, over 7% of the nation's electricity. They favor only the non- hydro "renewables." Furthermore, the potential for an increased contribution from hydropower is limited because few sites are available, there is opposition to expansion and the very real possibility that the contribution from hydropower could be reduced in the future. Reductions could come from diversion of water around dams to serve other needs (e.g., fish, recreation), breaching dams in some areas, and the slow pace of re-licensing of existing hydropower projects. b. Non-hydro "renewables" will provide little usable energy. The non-hydro renewables - wind, solar, geothermal, biomass (including wood and wood wastes) and municipal solid wastes (5) are, essentially, niche technologies that are not likely to ever make a significant contribution towards supplying US energy requirements. DOE has spent hundreds of millions in tax dollars on renewable energy R&D during the last 20 years. The small role that non-hydro renewable energy sources can be expected to play in supplying our energy and electricity requirements during the next 20 years is demonstrated clearly in the two tables, based on EIA data, shown on the next page. For example, the tables show that <u>all non-hydro renewables combined</u> (wind, solar, wood, wood, waste, biomass, geothermal, and municipal solid wastes) supplied only: - 3.67% of US overall energy requirements in 2000 and may reach only a 4.57% contribution by 2020. - 2.13% of US electricity generation in 2000 and are not expected to reach a 3% contribution by 2020. These small but realistic forecasts by EIA take into account the enormous federal and state subsidies now being provided some renewables such as "wind energy."

Russian Oil Disad

Rising in domestic drilling cuts off Russian oil purchases

Murray, Senior Fellow, Competitive Enterprise Institute, '8

[Iain Murray . Senior Fellow in Energy, Science, and Technology, Competitive Enterprise Institute. "Will More Drilling Increase U.S. Energy Security?" September 30, <u>http://www.cfr.org/publication/17327/</u> download date: 2-9-08]

As we are talking about security, we should therefore instead look at unfriendly or unstable nations whose supply might be disrupted by design or by virtue of their instability. I would therefore suggest that only the imports from Saudi Arabia, Venezuela, and <u>Russia could be termed as a source of energy insecurity</u>. By my calculation from EIA figures, those countries supply us with about 3 million barrels per day. That is the size of the energy security problem as it relates to oil-about one sixth of our total oil use. Now, <u>could domestic drilling help alleviate that problem?</u> According to the American Petroleum Institute, <u>federal lands and waters have the realistic potential to hold about 116 billion barrels of oil</u>, a figure that needs to be verified by exploration currently banned. In other words, <u>there's a good chance that federal lands and waters could alleviate that energy security problem for about a century</u>, assuming no further technological development beyond the ones I have already described. It is clear that we need to start exploration now to bring these resources online to meet our medium-long term oil energy needs. Ramping up energy production in any of the other areas Mr. Abraham talks about, and converting the nation's transportation system accordingly would take at least ten years, so the argument about timing is irrelevant. In the short-term there are other things we can do, some not immediately apparent; reform of the Air Traffic <u>Control system</u>, for example, could lower U.S. oil demand by 0.4 million barrels per day-about the same as <u>our imports from Russia</u>. In the end, however, in an uncertain world and with foreseeable technology, any reasonable definition of energy security has to include exploring for and drilling for those 116 billion barrels currently off-limits by law.

Russian Oil Disad

Even small decreases in domestic demand cuts off Russian oil purchases

Murray, Senior Fellow, Competitive Enterprise Institute, '8

[Iain Murray . Senior Fellow in Energy, Science, and Technology, Competitive Enterprise Institute. "Will More Drilling Increase U.S. Energy Security?" September 30, <u>http://www.cfr.org/publication/17327/</u> download date: 2-9-08]

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Russian Oil Disad Link

Renewable room would slash price for Russian oil and that collapses the Russian economy

Reno'96

[Robert Reno, Writer for Newsday, "Fixing' the System That Is to Care For An Aging Nation," April 7, L/N]

IF SCIENTISTS discovered tomorrow that a clean and safe source of infinitely renewable energy could be cheaply derived from, say, ordinary sea water, we all know it would be an unmitigated boon for mankind. Well, not exactly. Because any such invention would necessarily cause a collapse of oil prices, and Texas, Louisiana and Oklahoma would become basket states. In Mexico, where petroleum is the chief national patrimony, the floor under a fragile economy, would disintegrate. The Middle East would become a destabilized mess as oil-rich regimes lost the resources through which they now control their populations. Russia and the many former constituent republics of the Soviet Union would lose export earnings critically important to the survival of their democracies. Billions invested in the extraction of North Sea oil would lose its value. Ripple effects running through the financial system as a result of the downsizing and bankruptcy of much of the existing oil industry are simply too terrifying to contemplate.

<u>Russian Oil Disad</u> <u>Impact</u>

Collapse of the Russia economy brings a huge war involving nuclear weapons

David, Professor of Political Science, Johns Hopkins, '99

[Steven R David, Foreign Affairs, January/February, 1999, L/n]

AT NO TIME since the civil war of 1918-20 has Russia been closer to bloody conflict than it is today. The fledgling government confronts a vast array of problems without the power to take effective action. For 70 years, the Soviet Union operated a strong state apparatus, anchored by the KGB and the Communist Party. Now its disintegration has created a power vacuum that has yet to be filled. Unable to rely on popular ideology or coercion to establish control, the government must prove itself to the people and establish its authority on the basis of its performance. But the Yeltsin administration has abjectly failed to do so, and it cannot meet the most basic needs of the Russian people. Russians know they can no longer look to the state for personal security, law enforcement, education, sanitation, health care, or even electrical power. In the place of government authority, criminal groups -- the Russian Mafia -- increasingly hold sway. Expectations raised by the collapse of communism have been bitterly disappointed, and Moscow's inability to govern coherently raises the specter of civil unrest. If internal war does strike Russia, economic deterioration will be a prime cause. From 1989 to the present, the GDP has fallen by 50 percent. In a society where, ten years ago, unemployment scarcely existed, it reached 9.5 percent in 1997 with many economists declaring the true figure to be much higher. Twenty-two percent of Russians live below the official poverty line (earning less than \$70 a month). Modern Russia can neither collect taxes (it gathers only half the revenue it is due) nor significantly cut spending. Reformers tout privatization as the country's cure-all, but in a land without well-defined property rights or contract law and where subsidies remain a way of life, the prospects for transition to an American-style capitalist economy look remote at best. As the massive devaluation of the ruble and the current political crisis show, Russia's condition is even worse than most analysts feared. If conditions get worse, even the stoic Russian people will soon run out of patience. A future conflict would quickly draw in Russia's military. In the Soviet days civilian rule kept the powerful armed forces in check. But with the Communist Party out of office, what little civilian control remains relies on an exceedingly fragile foundation -- personal friendships between government leaders and military commanders. Meanwhile, the morale of Russian soldiers has fallen to a dangerous low. Drastic cuts in spending mean inadequate pay, housing, and medical care. A new emphasis on domestic missions has created an ideological split between the old and new guard in the military leadership, increasing the risk that disgruntled generals may enter the political fray and feeding the resentment of soldiers who dislike being used as a national police force. Newly enhanced ties between military units and local authorities pose another danger. Soldiers grow ever more dependent on local governments for housing, food, and wages. Draftees serve closer to home, and new laws have increased local control over the armed forces. Were a conflict to emerge between a regional power and Moscow, it is not at all clear which side the military would support. Divining the military's allegiance is crucial, however, since the structure of the Russian Federation makes it virtually certain that regional conflicts will continue to erupt. Russia's 89 republics, krais, and oblasts grow ever more independent in a system that does little to keep them together. As the central government finds itself unable to force its will beyond Moscow (if even that far), power devolves to the periphery. With the economy collapsing, republics feel less and less incentive to pay taxes to Moscow when they receive so little in return. Three-quarters of them already have their own constitutions, nearly all of which make some claim to sovereignty. Strong ethnic bonds promoted by shortsighted Soviet policies may motivate non-Russians to secede from the Federation. Chechnya's successful revolt against Russian control inspired similar movements for autonomy and independence throughout the country. If these rebellions spread and Moscow responds with force, civil war is likely. Should Russia succumb to internal war, the consequences for the United States and Europe will be severe. A major power like Russia -- even though in decline -- does not suffer civil war quietly or alone. An embattled Russian Federation might provoke opportunistic attacks from enemies such as China. Massive flows of refugees would pour into central and western Europe. Armed struggles in Russia could easily spill into its neighbors. Damage from the fighting, particularly attacks on nuclear plants, would poison the environment of much of Europe and Asia. Within Russia, the consequences would be even worse. Just as the sheer brutality of the last Russian civil war laid the basis for the privations of Soviet communism, a second civil war might produce another horrific regime. Most alarming is the real possibility that the violent disintegration of Russia could lead to loss of control over its nuclear arsenal. No nuclear state has ever fallen victim to civil war, but even without a clear precedent the grim consequences can be foreseen. Russia retains some 20,000 nuclear weapons and the raw material for tens of thousands more, in scores of sites scattered throughout the country. So far, the government has managed to prevent the loss of any weapons or much material. If war erupts, however, Moscow's already weak grip on nuclear sites will slacken, making weapons and supplies available to a wide range of anti-American groups and states. Such dispersal of nuclear weapons represents the greatest physical threat America now faces. And it is hard to think of anything that would increase this threat more than the chaos that would follow a Russian civil war.

Domestic Drilling NOT Solve Dependency & Prices

Domestic oil is too little to solve dependency or prices

Lavelle '8

[Marianne Lavelle, Senior Writer at U.S. News and World Report, "Foreign Oil Dependence by Choice?" April 3, U.S. News and World Report, Section: Money & Business, download date: 11-1-08 http://www.usnews.com/blogs/beyond-the-barrel/2008/4/3/foreign-oil-dependence-by-choice.html]

We'll set aside, for the time being, the fact that many people believe these numbers are overstated and the entire world (particularly Saudi Arabia) has much less in reserves than we think.

The oil executives are now implying that the U.S. reserves could be much greater, and our foreign dependence on oil could be much less, if Congress would only allow them to drill off both the East and West coasts of the United States and in ANWR.

But <u>let's take the oil industry's own analysis</u>, released last July, in the National Petroleum Council's report "Facing Hard Truths About Energy." Yes, <u>the</u> <u>NPC urged that the government expand access to areas that are now viewed as protected, and as a result</u>, the group estimated, "Material <u>increases to current reserves</u> within five to 10 years from currently inaccessible areas <u>could approach 40 billion barrels of oil</u>." <u>That would put</u> <u>us right around</u> Russia (as currently estimated anyway), with still <u>less than 5 percent of the world's oil</u>.

Of course, for <u>a lot of folks</u>, it's more comforting to believe that we have a Saudi Arabia lurking beneath the tundra that we just <u>haven't taken advantage of</u>, than to think that we truly are in an energy mess.

Chavez Answers - No Embargo

Chavez won't cut off the U.S. - it would be economic suicide for his country

Bremmer, President, Eurasia Group, '05

[Ian, President of the Eurasia Group and a senior fellow at the World Policy Institute. Ph.D. in Political Science from Stanford. Prices transform oil into a weapon: Petroleum politics," August 27, International Herald Tribune, <u>http://www.iht.com/articles/2005/08/26/news/edbremmer.php</u> download date: 2-11-09]

The danger is that these factors make it much more likely that an oil producing state with a political axe to grind will cut output to certain customers (or at least threaten to do so), essentially take a small amount of oil off the market, and profit from the resulting price hike. This sharply increases the market power - and political leverage - of oil-exporting states, even for marginal producers. That makes diplomatic disputes with these countries more difficult to resolve.

In fact, it's already happening. The United States imports some 14 percent of its oil from Venezuela. President Hugo <u>Chávez has</u> repeatedly threatened to cut exports to the United States if Washington continues to antagonize his government. Ultimately, <u>Venezuela's oil economy remains so deeply integrated with that of the United States that Chavez would be hard-pressed to</u> withstand the self-inflicted economic damage from a diversion of so much oil away from U.S. ports.

<u> Chavez Answers – No Internal Link</u>

Drop in oil prices won't stop social program spending by Chavez

Associated Press 2-20-09

["Chavez: Oil prices will not slow social spending," <u>http://www.iht.com/articles/ap/2009/02/20/business/LT-Venezuela-Economy.php</u> download date: 2-23-09]

President Hugo <u>Chavez on Friday acknowledged that falling oil prices are hurting Venezuela's stalling</u> economy, but insisted he would not cut the social spending programs that have won him fans.

"For Venezuela, this is hard, difficult," Chavez said, admitting that a 75 percent decline in oil prices since July has left prices significantly lower than expected.

Venezuela relies on oil for 94 percent of exports and nearly half its federal budget, which this year assumed the price for Venezuelan crude would average \$60 a barrel. Today's reality is nearly half that: Venezuela's basket closed the week at an average \$33.93 a barrel.

<u>Chavez has vowed to use reserves stored in several development funds to maintain social spending, and</u> pledged the same again Friday. Opponents had predicted Chavez would maintain spending through a Feb. 15 referendum that earned the right to seek indefinite re-election.

Finance Minister Ali Rodriguez this week warned the government would prohibit the import of some "unnecessary" goods to conserve foreign currency reserves and be "more rigorous" in tax collection to balance the budget. He gave no other details.