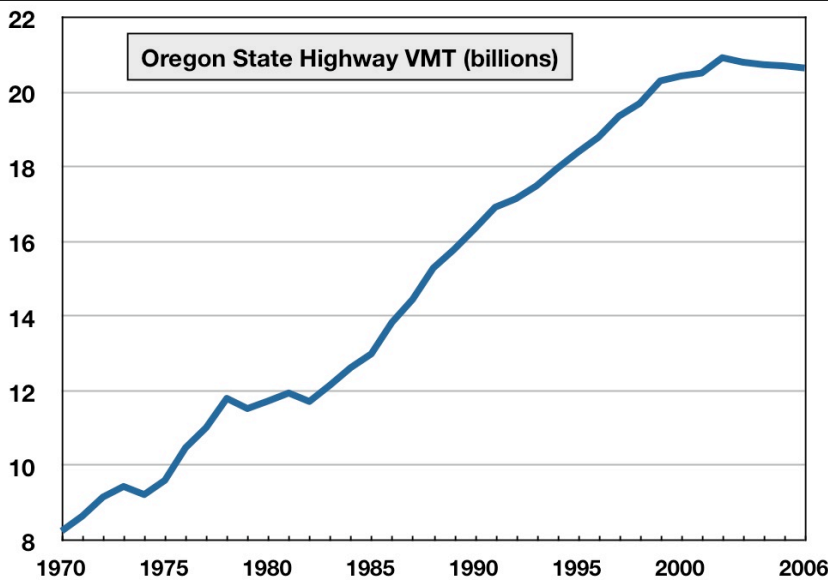


# PEAK TRAFFIC

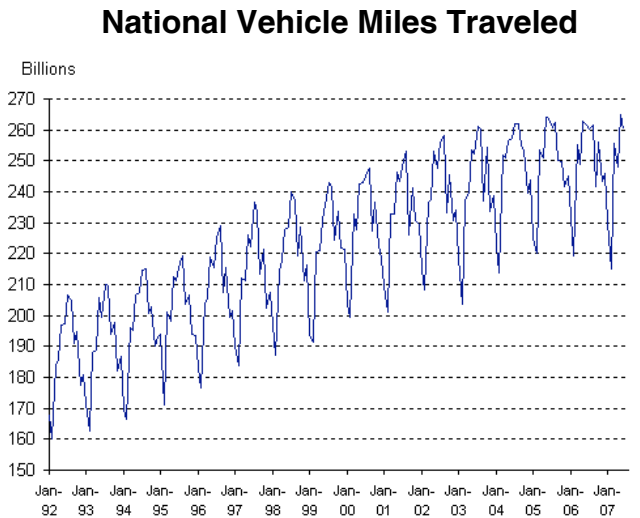
## Planning NAFTA Superhighways at the End of the Age of Oil

As the world passes the peak of global petroleum production, gasoline prices are likely to increase to the point that traffic demands on roads will be reduced. While it is impossible to accurately predict the price of fossil fuels five, ten, or twenty years in the future, it will be surprising if gasoline is not rationed on the downslope of the Peak Oil curve (either directly by ration cards or indirectly by pricing it out of reach of many who currently consume it). US federal transportation law requires that new federal-aid highway projects consider the traffic demand twenty years in the future -- so the reality of Peak Oil and climate change means that the continent wide rush to build more bypasses, wider bridges, Outer Beltways and NAFTA Superhighways will not be needed.

**partial solutions: repair or replace worn out bridges (but not with wider bridges) while we still have oil invest in public transit & Amtrak, get ready to travel less, grow food in the cities to reduce oil dependence**

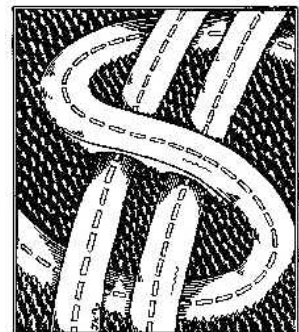


source: [www.oregon.gov/ODOT/TD/TDATA/tsm/vmtpage.shtml](http://www.oregon.gov/ODOT/TD/TDATA/tsm/vmtpage.shtml)  
 1973: dip due to Saudi oil embargo  
 1979: dip due to gas lines after Iranian revolution  
 2002: peak traffic on Oregon highways  
 The current dip is not temporary, it is more like climate change, a permanent shift in the way things work.



source: US DOT Bureau of Transportation Statistics  
[www.bts.gov/publications/white\\_house\\_economic\\_statistics\\_briefing\\_room/august\\_2007/html/highway\\_vehicle\\_miles\\_traveled.html](http://www.bts.gov/publications/white_house_economic_statistics_briefing_room/august_2007/html/highway_vehicle_miles_traveled.html)  
 national VMTs peaked about two years ago  
 traffic levels vary through the year  
 (there is more driving in the summer than the winter)

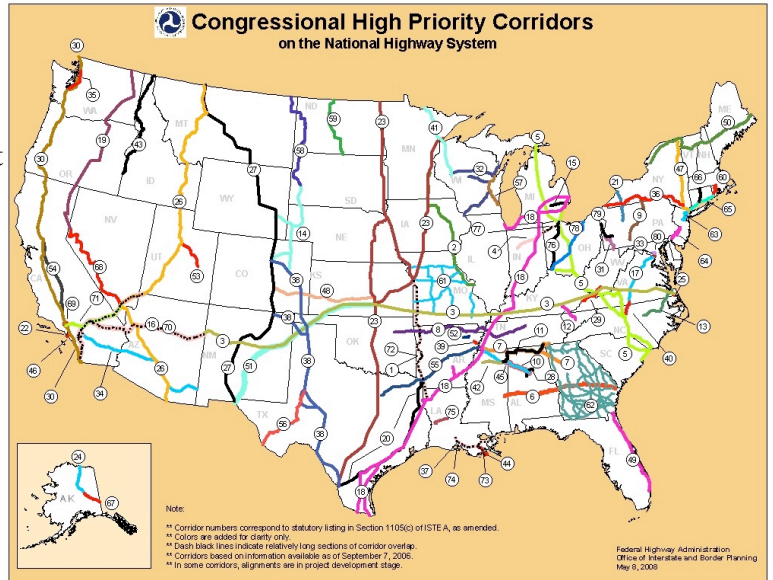
Peak Oil does not mean that civilization is about to run out of oil. We are near (or at) the point where continued growth of petroleum combustion no longer can be maintained, which will have profound consequences for the global economy that is dependent on exponential growth of nearly everything (especially of money supplies). Energy creates the economy, a physical limitation rarely acknowledged by economists. Peak Oil is also the point where the maximum amount of economic "growth" is reached -- and a turning point where we could decide to use the remaining half of the oil as a bridge toward a more sustainable society. It would require enormous energy, money and people power to reorient away from NAFTA Superhighways toward investing in bullet trains, away from dirty fossil fuels toward efficiency and renewable energy systems, away from resource wars and toward global cooperative efforts to reduce our collective impact on the biosphere.



published by  
**Mark Robinowitz**  
[www.naftahighway.org](http://www.naftahighway.org)  
[www.road-scholar.org](http://www.road-scholar.org)

## NAFTA Superhighways

The NAFTA Superhighway project is a series of north-south interstate highways across the U.S. These new and expanded roads would stretch from Canada through the U.S. to Mexico (excepting certain East Coast routes that would merely connect to ports on the Atlantic or Gulf coasts). The initial proposal for NAFTA Superhighways was in the 1991 "ISTEA" Federal transportation law, but has now expanded in scope to encompass several "superhighways on steroids." These oversized roads would have many car lanes, truck only lanes, parallel freight train lines, passenger train lines and utility corridors (electricity, oil, natural gas, water, etc). The planning for NAFTA Superhighways is predicated on continued cheap and abundant gasoline -- an assumption about to receive sobering reality from the underlying geological limits of petroleum production. NAFTA Superhighways are essentially a key component of further "globalization" of commodity production intended to homogenize local communities and further centralize control over manufacturing.



## Troubled Bridges Over Water: time for transportation triage

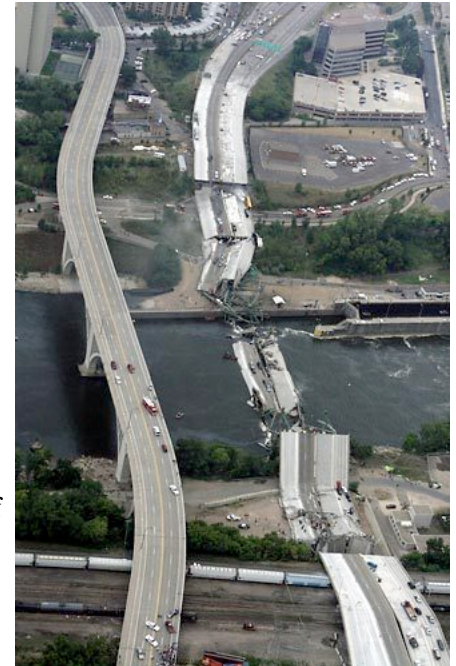
"Another flaw in the human character is that everyone wants to build but nobody wants to do maintenance"  
 -- Kurt Vonnegut

The notorious collapse of the I-35W bridge in Minneapolis in 2007 points out the dangers of deferring maintenance in favor of building more and more roads -- a change in priorities is long overdue.

We can choose as a society to either expand the highway system some more (NAFTA Superhighways, more Outer Beltways and bypasses, etc) or focus on making sure that the existing network can be maintained after Peak Oil.

Unfortunately, few politicians highlight the need to make AMTRAK a serious transportation system for efficiently moving people. A national priority for quality train service would create a lot of good jobs, reduce energy consumption, and make it more likely that the United States will be able to mitigate the inevitable impacts of the end of the petroleum era.

It is likely that about \$1 trillion has been spent to destroy the nation of Iraq (if preparations for the conflict are included), home to the planet's second largest oil reserves. This is more than half of the cost that has been estimated for rebuilding the tens of thousands of deficient highway bridges that are aging and becoming dangerous.



## Post Peak Oil Transportation = Trains

There are several serious - but languishing - proposals for high speed rail in the United States that would be similar to European and Asian networks. Building them would probably cost less than the money spent on the War on Iraq.

The aviation industry did not anticipate the recent rises in oil prices, and the era of cheap flights will not last beyond the era of cheap oil. Inter-city transport is going to require major investment in AMTRAK to provide energy efficient transportation. Some of this new and upgraded service could include solar panels along the train tracks to provide some of the power that electrified trains require.

# Alternative fuels and plug-in hybrids won't stop Peak Traffic

Most renewable energy systems are largely focused on generating electricity. Transportation systems are almost entirely based on burning liquid fuels, which are not generated by solar PV power or wind turbines.

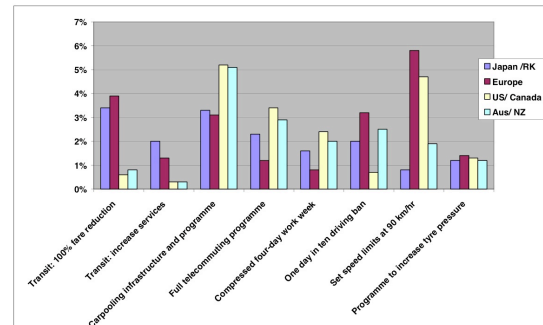
All of the major car companies have developed much more efficient vehicles (Greenpeace, "The Environmental Impact of the Car," 1992), with many models around 100 mpg. VW even has a small model that is highway rated that gets about 250 mpg -- the VW CEO drove it to their annual stockholder meeting a few years ago.

While technological shifts may help mitigate the energy crisis after Peak Oil, it cannot eliminate the problem. There are no factories to make these vehicles. There are no capital investments to fund the conversion of existing factories to make hyper-efficient cars. The existing fleet of vehicles are not going to be instantly eliminated in favor of efficient cars, as the owners have invested heavily in their current models -- most people who bought a \$50,000 SUV is not easily going to be able to absorb the loss by purchasing a new car that is more efficient. At best, the investment in more efficient vehicles may slow the decline of VMTs on the Peak Oil downslope -- but it cannot prevent that decline. There is also the problem of substantial use of oil and mineral ores to manufacture new cars, even efficient ones. Carpooling is a more promising short term mitigation than 100 mpg cars.

Electric cars, even if a hundred million were instantly produced and distributed (in factories that don't exist), could not substitute for food delivery trucks, tractors, freight trains, most Amtrak trains, container ships that bring us cheap crap from Chinese slave labor factories, passenger planes, cargo planes, war planes, petrochemicals for non-transport purposes, fossil fuels used to heat homes and run factories, depleting natural gas used to power part of the electric power grid, oil use at mines and many other uses that show we are not addicted to oil -- we are extremely dependent upon oil because the "alternatives" are less concentrated and therefore unable to substitute completely.

T. Boone Pickens has proposed a multi-billion dollar investment in large scale windpower to replace natural gas powered generation so the gas could be used to fuel some transportation systems. But by the time this is implemented, it is likely that most natural gas supplies from the western US and Alberta will become more scarce. Eventually, we will need to scale back natural gas for electricity so it can be reserved to heat buildings, especially in the colder climates where some of the gas is extracted from. Whatever renewable energy systems are installed between now and then will need to replace the substantial inputs that natural gas has for electric power grids at the same time that there is less available energy to manufacture solar panels and wind turbines. Relocalization of food production makes more sense.

## Percent reduction in total fuel use by IEA region, selected measures



Imperial College  
London

from "Saving Oil in a Hurry"

[www.iea.org/textbase/work/workshopdetail.asp?id=210](http://www.iea.org/textbase/work/workshopdetail.asp?id=210)

The US could immediately reduce oil consumption by an estimated 4% by rolling back highway speed limits to 55 mph (90 kph), a policy originally enacted by Richard Nixon in the wake of the 1973 Saudi Oil Embargo. This would reduce more oil consumption than the current flow through the Alaska Pipeline and would not require any technological innovations, merely psychological acceptance of the need for conservation. (statistic source: "Saving Oil in a Hurry: Oil Demand Restraint in Transport," by International Energy Agency, Workshop: Managing Oil Demand in Transport, Paris, 7-8 March, 2005)

The fact that this simple solution, which only requires new signs, not new technologies, is not considered politically realistic shows that addressing the energy and climate crises is not really a priority.

## Tolling without tollbooths: the J. Edgar Hoover Memorial Highway

As gas tax revenues decrease from Peak Traffic and more efficient cars, the highway lobby wants to charge motorists mileage taxes - you pay for the distance you drive. Some highways are already fitted with electronic tolling systems including RFID transmitters, GPS based tracking systems and automatic license plate readers. These systems charge someone driving a hummer the same as someone driving a hybrid. Gasoline taxes would shift the burden to those driving less efficiently, whether driving a fuel inefficient vehicle, speeding at 70 mph (versus 55) or otherwise driving aggressively in ways that increase fuel consumption. Electronic toll roads also allow the government to keep track of motorists movements, an intrusive snooping system that Hitler, Stalin and George Orwell did not envision as means of population control.



## Nuclear power: an insane way to boil water

The nuclear industry is using the Peak Oil and Climate Change crises to promote more reactors as the energy solution --- but reactors cannot displace oil consumption or reduce carbon dioxide and other greenhouse gases.

Nuclear power reactors cause significant climate change impacts. An enormous amount of coal power is required to run the nuclear fuel cycle: uranium mining, milling, enrichment and fuel fabrication. The amount of energy required to babysit the wastes for millennia cannot be calculated, but it is arrogance beyond description to assume future generations will solve our problems.

Reactors also concentrate enormous amounts of heat in a local area -- carbon emissions are not the only issue with climate destabilization.

Uranium mining is one of the worst abuses of the planet. The solution is to leave uranium in the ground where it cannot poison the biosphere. Irradiated nuclear fuel rods, misleadingly called “spent fuel,” are the most toxic things created in the 20th century.

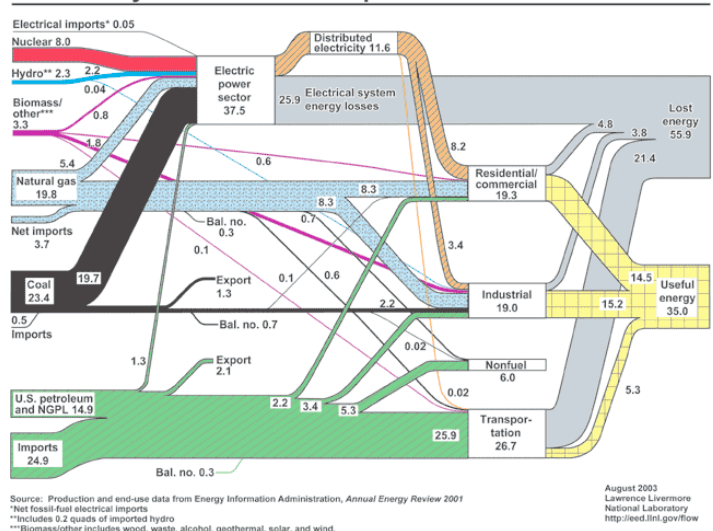
The law of entropy ensures there is no way to isolate radioisotopes synthesized in reactors from the biosphere. If we were a planet of peaceful robots nuclear power might have some validity, but DNA and ionizing radiation are incompatible and all reactors make bomb materials for their operators.

The 1975 “**Barton Report**” from the Nuclear Regulatory Commission admitted that a police state would be needed to safeguard the nuclear materials if “reprocessing” was used to “recycle” nuclear fuels for a complete “plutonium economy.” **Any state or corporation with a nuclear reactor can make a nuclear bomb.** India started its weapons program with allegedly peaceful reactors from Canada. The Bush regime made a nuclear technology trade with India despite that country's refusal to sign the Non Proliferation Treaty. But the NPT is not sufficient to prevent the spread of nuclear weapons, since the inspections are weak and any signatory country can withdraw from the treaty with a few months notice.

## Solar Energy: the only safe nuclear power

- Solar energy cannot make weapons of mass destruction.
- Solar power is decentralized and more democratic.
- Solar power does not require a police state apparatus to control the sale of the raw materials.
- Solar panels cannot contaminate farmland for millennia.
- Solar power does not generate huge amounts of heat that can alter local climates.
- Solar power does not require the huge amounts of coal power needed to enrich uranium. Solar panels do require energy inputs, but much less than a reactor.
- Solar power does not generate ultrahazardous nuclear wastes that are dangerous for eons.
- The only safe reactor has a 93 million mile evacuation zone, it is harvested with solar panels, wind mills, and photosynthesis (green plants).

## U.S. Energy Flow Trends – 2001 Net Primary Resource Consumption ~97 Quads



## Nuclear power makes electricity, not liquid fuels

Nuclear power cannot displace the use of oil (which mostly powers transportation, very little oil powers the North American electric grid).

They require massive amounts of fossil energy for the fuel cycle (uranium mining, milling, enrichment, transport, waste storage for millennia). Uranium enrichment facilities in Ohio, Kentucky and Tennessee had giant coal power stations for the needed electricity.

As the non-renewable energy inputs to our exponential growth society decline, we will be forced to reduce our tremendous waste of energy. But the long term solutions would require us to give up growth and live within our our annual solar budget. Renewable energy could power a stable state society, but not a “growth” system based on ever increasing consumption on a finite planet.



Rancho Seco nuclear reactor near Sacramento, closed by a democratic vote of the citizens, one megawatt solar electric installed next to the reactor



# Connecting the Peak Oil dots

Mark Robinowitz [www.oilempire.us](http://www.oilempire.us)

**The most important question facing the human race is how we respond to the interconnected crises of Peak Oil, Climate Change, overpopulation, and resource conflicts.**

How we use the remaining oil will determine what the "post carbon" society will be:

- do we "spend" it on solar panels or battleships?
- on relocalizing food production or further "globalization" of production?
- more superhighways or better trains?
- more coal, oil and nuclear, or more renewable energy systems?

The global crises of the end of cheap oil and the start of climate change require global levels of solutions (relocalize everywhere). We are not merely at peak oil, we are at peak technology, peak money, peak communication. Real solutions would require us to redirect the energy, talents, resources of global capitalism, the military industrial complex, universities, media and other pillars of our society.

We have enough resources and talent to shift civilization to create a peaceful world that might be able to gracefully cope with the end of concentrated fossil fuels, or to create a global police state to control populations as the resources decline. We don't have the ability to have a peaceful world while embarking on a World War over the last of the fossil fuels that power civilization.

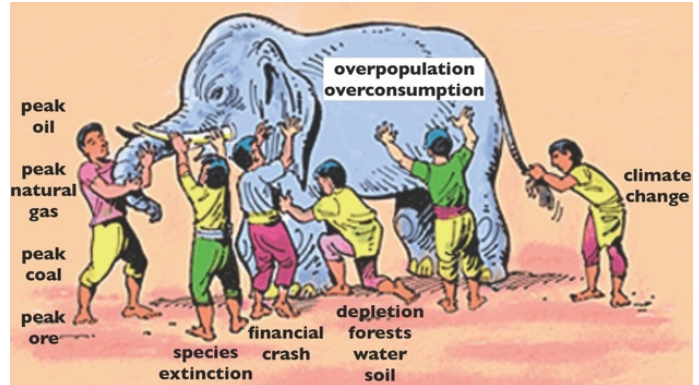
This is a simple question that has a complicated answer - since these decisions were not made democratically. Understanding why civilization did not respond to the warnings of resource depletion decades ago is needed if a shift toward sanity is still possible at this late date.

We are not "addicted" to oil -- the modern world is completely dependent upon it for our industrial agriculture systems, our transportation networks, and the global economy. Addictions are things you can give up -- but oil runs our civilization.

**Documentation for these connected dots are at [www.oilempire.us](http://www.oilempire.us)**

## Peak Oil and Climate Change

These crises resemble the parable of the blind men touching an elephant. Each observer is correctly describing what a part of the elephant is, but none have a holistic understanding. Peak Oil and Climate Change are two facets of the problem of overshoot, and neither can be mitigated in isolation from the other.



Peak Oil and Climate Change can only be addressed in combination, trying to tackle one without the other is a proven failure. Efforts to deal with Peak without Climate awareness leads to tar sands, coal to liquids and other eco-disasters. Efforts to deal with Climate without Peak fail to understand what is happening, and rarely consider how dependent our food system is on concentrated fossil fuels.

Focusing solely on oil depletion leads to destructive policies aimed at increasing liquid fuels production -- "alternative" fuels that can have worse environmental impacts than conventional petroleum, including accelerated climate change.

Concern about melting glaciers and extinction of charismatic megafauna is less likely to influence governmental energy policies than desperate scrambles to replace depleting fossil fuels.

Most projections of future carbon levels ignore the fact that fossil fuels are finite. Focusing solely on climate change ignores the most important question facing humanity -- whether to "spend" the remaining oil on solar panels or battleships (a simplified version of the choice).

This is the way that carbon emissions are going to be reduced, not through voluntary simplicity nor offset campaigns. Efforts to "reduce carbon by 2050" are a subtle way to acknowledge Peak Oil.

## Peak Oil and 9/11

Peak Oil was the primary motive of the Bush regime for allowing and assisting the attacks.

Without 9/11, it would have been impossible for the US to invade Iraq and take over their oil fields, which gives the US a dominant military position in the middle of the world's main oil production region as we pass the point of Peak Oil.

The first cabinet meeting of the Bush administration (after they stole the White House) included discussion of how they were going to attack Iraq. In the spring of 2001, the Cheney energy task force included examination of maps of Iraqi and other Persian / Arabian Gulf oil fields and which companies had drilling rights. Vice President Cheney was on record as knowing about Peak Oil before entering the White House, and presumably the oil company connected officials in their administration were also aware of this basic fact. The energy task force happened around the same time that warnings that 9/11 was imminent were pouring into the White House from close US allies and even from within the FBI (which had agents tracking the flight schools that some of the perpetrators were training at).

Peak Oil and 9/11 complicity are inseparable issues, even if most who focus on one or the other chose to look at them in isolation from each other.

## Peak Oil and the Media

Neither the mainstream (corporate funded) media nor the alternative (foundation funded) media chose to highlight Peak Oil before the peak. The media is slowly doing more stories about Peak Oil, although it took the War on Iraq, rising gasoline prices and grassroots awareness of Peak Oil to force this slow shift. The media also ignores that Peak Oil was the motive for the Bush / Cheney war crimes in the Middle East and for allowing 9/11 to happen.

The mass media, politicians and most environmental groups do not want to ask why our society largely ignored warnings about climate change. Few of them consider how Peak Oil and global warming are two ways of looking at the same problem of overconsumption.

The failure of the media to educate the public about the basic facts of oil depletion allows pandering politicians to blame others for rising gas prices and focus attention on the distraction of where we should (or should not) be drilling for oil instead of how our fossil fuel dependent society going to cope with the end of cheap oil.

## Peak Oil and Homeland Security

The best analyses of Peak Oil and of global warming each conclude that the problem would have to be addressed a decade or two before it manifests at full strength - yet both problems are here, now. Perhaps the truth is that the shadow government (corporations and the military industrial complex) did not want to deal with these problems because the solutions are inherently decentralized and would require relaxation of centralized power control systems. Since we missed the opportunity to solve these issues as gently as possible, governments are instituting a global surveillance police state to suppress dissent as the oil that runs the show becomes more scarce and expensive, and climate change reduces available food and water supplies.

## Peak Oil and Fake Elections

President Carter made modest efforts to start shifting from total dependence on oil, but his administration was toppled in a virtual coup d'etat by the national security state.

The Clinton / Gore administration had nice rhetoric on the environment, but gave us energy deregulation, SUVs and NAFTA superhighways instead of renewable energy, hyper-efficient cars, and a European quality passenger train system.

Bush and Cheney are on record as aware of Peak Oil, but chose to direct the federal government toward policies that merely benefit the wealthiest, some of whom are looting what they can as their preparation for the end of cheap fossil fuels. In their view, renewable energy is for the rich and powerful, and is increasingly in use by the military - Guantanamo concentration camp has wind turbines to supply some of its electricity.

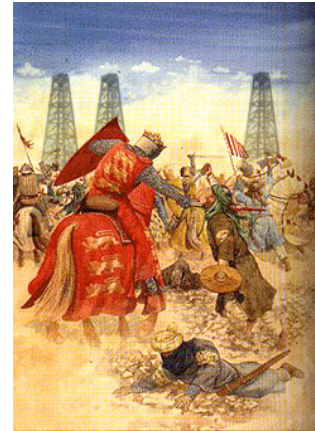
The 2008 Presidential contest features two flavors of nonsense about energy from John McCain and Barack Obama - neither mention Peak Oil in their distracting sound bites about how much to drill in the US (a place that peaked nearly four decades ago). Even independent candidate Ralph Nader claims that more refineries need to be built to lower oil prices, although oil companies will not invest in facilities to process oil that does not exist. The only new refineries likely to be built in the US will be for "unconventional" oil from heavy "sour" oil, tar sands, coal to liquids and other gunk not otherwise usable in cars and trucks and planes (without special processing). The refusal of oil companies to build more refineries is like the timber companies on the West Coast lack of need for new lumber mills to slice up giant old growth logs, since existing facilities can handle the last remnants of the ancient forest.



# Peak Oil Wars

The Empire's New Middle East Map:  
ethnic cleansing and petroleum geography  
using religious and ethnic divisions to split Iraq, Iran  
and Saudi Arabia to control their oil rich provinces

In June 2006, Armed Forces Journal published this map from Ralph Peters, a prominent pro-war strategist. It shows the method to the madness -- creating ethnic tension and civil war in order to redraw the boundaries. Most of the existing borders were imposed by Britain and France after World War I - and conveniently (for the US and Europe) divide most of the Arabs from most of the oil. Note that their new "Arab Shia State" would contain much of the oil, separating governments in Riyadh, Baghdad and Tehran from what is currently the main source of their national wealth.



<http://live.armedforcesjournal.com/2006/06/1833899>

Blood borders: How a better Middle East would look

By Ralph Peters Armed Forces Journal - June 2006

note: the online version of this article no longer has a link to this map



# Peak Oil Wars [www.peakoilwars.org/new-map.html](http://www.peakoilwars.org/new-map.html)

**we are witnessing a sequential war to control the largest reserves on a planet that is running out of oil.**

**-- Michael Ruppert, From the Wilderness**

**The poor countries will bear most of the burden [of high oil prices]. But the United States will be in serious difficulties. There is, I fear, a strong danger of some ill-considered military intervention to try to secure oil.**

**-- Colin Campbell, petrogeologist, December 2000**

The US empire is playing a "Good cop / bad cop" strategy where the neo-cons wrecked Iraq but the neo-liberals are in agreement that Iraq should be partitioned (which would allow the US greater control over the oil). If the bulk of the remaining oil was in places that were predominantly Buddhist or Hindu, the US would be waging a war on Buddhism or Hinduism.

The national borders of the Middle East countries were mostly drawn by British and French imperialist bureaucrats around 1920, not by citizens of these nations. These lines separate the bulk of the Arab peoples from the bulk of the oil wealth, a quasi-Apartheid situation deeply resented by millions of poor Arabs. The Arab world is roughly divided into countries with large populations and little oil, and countries with little populations and large amounts of oil (an oversimplification, but the general point is valid). But these configurations still allow for nationalist control over tremendous oil resources - which the US empire still resents.

The neo-cons call the current Middle East conflict "World War IV." They consider the many wars under the umbrella of the Cold War to have been World War III. If you add up the number of bodies in the wars between 1945 and 9/11, the casualties are comparable to World War II.

Some of the neo-cons have publicly proclaimed that their goal for the War on Iraq (and eventually, its neighbors) is to **redraw the borders of the Middle East**. The ostensible reason given for this arrogance is to separate feuding ethnic and religious groups from each other. However, if you combine maps of the "new Middle East" sought by these armchair warriors with maps of the oil fields, a more sinister motive becomes obvious. Dividing up Iraq, Iran and Saudi Arabia would allow the consolidation of most of the region's oil into a new country (which presumably would be allied to the United States). This would remove control over the oil from governments based in Baghdad, Tehran and Riyadh, allowing new arrangements of

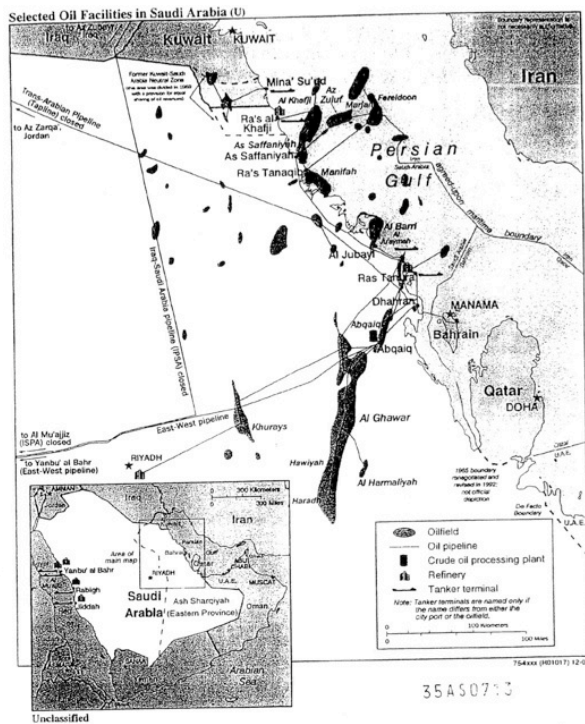
control to be established.

The supposed "failure" of the Bush Cheney invasion of Iraq allows for a new administration to supposedly fix the problems of their civil war by **splitting Iraq into three new states** - a Kurdish enclave in the north, a Shiite Arab state in the south, and a Sunni region in the center. Most of Iraq's oil would be concentrated in the Shiite region, with lesser amounts in the Kurdish part, and very little would remain for the Sunnis. This would allow the US to focus its occupation and manipulation on the parts of Iraq that have oil, and the parts without oil could be ignored.



**Saudi Arabia** has a similar confluence of ethnicity with petroleum geography. Saudi oil fields are in the east, along the Persian / Arabian Gulf. The two holy cities of Mecca and Medina are in the west, along the Red Sea. Some neo-conservatives have floated the idea of partitioning Saudi Arabia into at least two countries - one with the holy cities but without oil, the other without holy cities but with oil fields. The US merely wants to control the oil and is not interested in occupying the holy cities of Mecca and Medina.



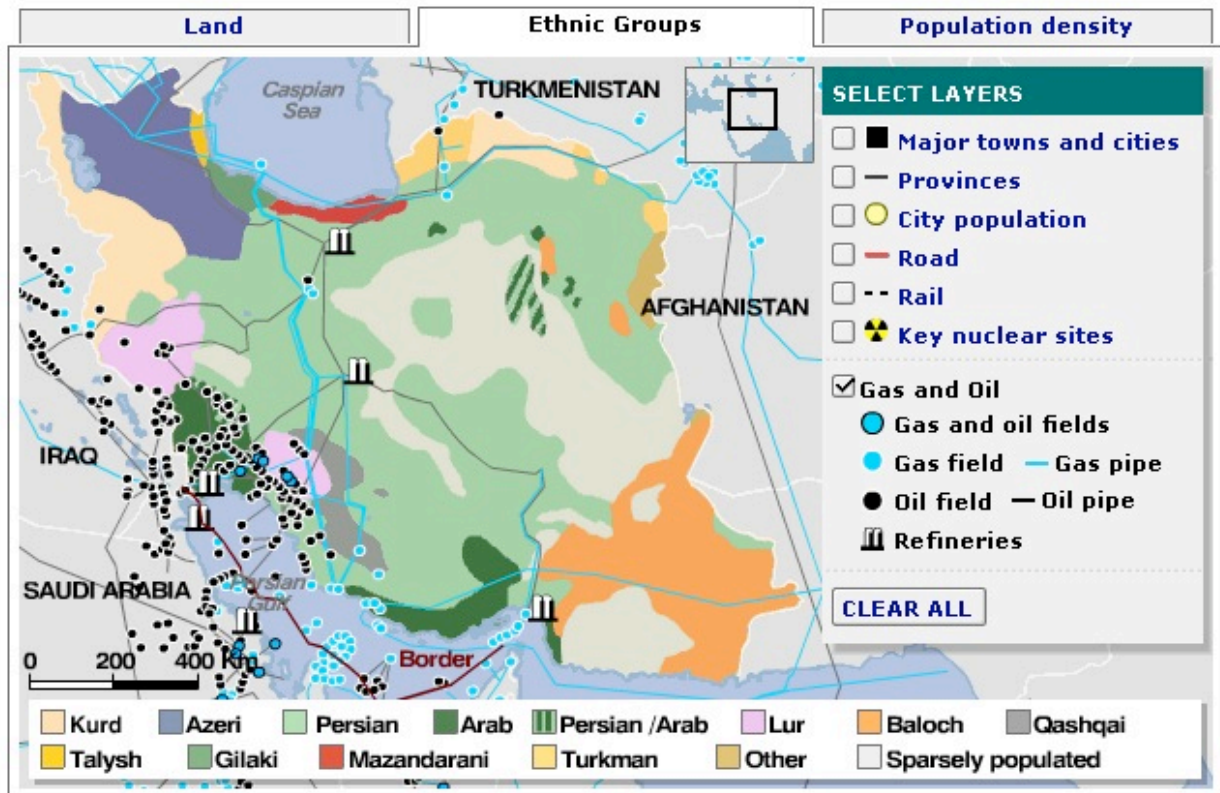


map used by Cheney's Energy Task Force in 2001, disclosed by a lawsuit from Judicial Watch - Saudi Arabian oil fields are all in its eastern province

**Iran's oil** is mostly in the western provinces along the Persian / Arabian Gulf. One particularly oil rich region is Khuzestan, an Arab area of Iran. Most "Westerners" probably think that Iran is an Arab country, but while it is Islamic, it is not Arab. Most Iranians speak Farsi, not Arabic. Iranians are Persians, not Arabs. Iran is a multi-ethnic country, but it is a strange circumstance that the area with the most Arabs is also one of the areas with lots of oil. In 1980, when Iraqi dictator Saddam Hussein attacked Iran (with the covert help of the US), he was hoping to seize Khuzestan's oil fields to add them to his own oily empire (Khuzestan is on the border of southern Iraq).

**The neo-con proposal for a new "Arab Shia State" along the northern Persian / Arabian Gulf would separate the bulk of the oil from Iraq, Iran and Saudi Arabia.**

Senator Joe Biden (D-DE), chair of the powerful Senate Foreign Relations Committee, ran for President in 2007 largely on the platform of promoting Iraqi partition as a "solution" to the Iraqi disaster that Bush's invasion created. While Biden's presidential ambitions went nowhere, he is now Obama's Vice Presidential running mate.



Sources: CIA World Factbook, www.citypopulation.de, GlobalSecurity, 1996 Iran Census, Petroleum Economist, Times Atlas

BBC map of Iranian oil fields and ethnic groups

## Vegetarian Diets: Energy Efficient Eating

[www.oilempire.us/peak-grain.html](http://www.oilempire.us/peak-grain.html)

The fastest way that agribusiness could reduce oil consumption would be to decrease factory farm production of meat. This shift would probably be more controversial than relocalization or organic standards.

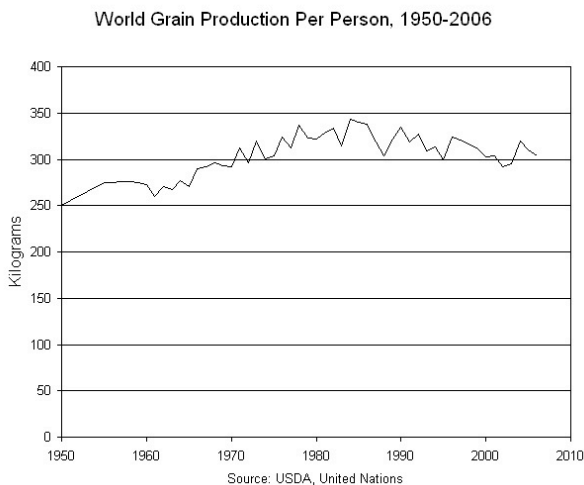
Adopting a largely plant based diet in the rich parts of the world is not an issue of animal rights or nutrition - but it is needed survival in the era of Peak Oil and climate change.

Humans did evolve to be omnivorous, but the fast food diet of meat at every meal is a new, toxic innovation. The traditional Chinese style diet of a small amount of meat to flavor the rest of the meal is probably compatible with our vegetarian oriented digestive tract, but our factory farmed meat-three-times-a-day diet is unsustainable under any circumstances.

Most estimates of the amount of fossil energy and other inputs needed to produce food assume a meat oriented diet, ignoring the fact that much less oil, fertilizer and water is needed to feed vegetarians. Even rice requires much less water than hamburgers!

Raising chickens on a small farm or suburban backyard for eggs (and the occasional meal of meat) is not as energy consumptive as overcrowded factory farms, but these sensible practices are unlikely to satisfy current rates of meat consumption. Grass fed beef is healthier for the land and the eater than grain fed beef, but free range cows cannot substitute completely for feed lots. A sane food system would produce less beef.

"It is actually quite astounding how much energy is wasted by the standard American diet-style. Even driving many gas-guzzling luxury cars can conserve energy over walking -- that is, when the calories you burn come from the standard American diet!" -- John Robbins, "Diet for a New America" Stillpoint Publishing (1987)



the graphic is from Earth Policy Institute



### Rep. Roscoe Bartlett on vegetarian diets

"in a former life, one of the things I did was to be a farmer. I would caution that we need to be careful how optimistic we are about how much liquid fuels we're going to get from agriculture ... a fifth of the world will go to bed hungry ...

If we lived lower on the food chain we would have some energy to invest [in biofuels] ...

if you were to eat the corn and soybeans rather than the pig and chicken that ate the corn and soybeans, you would have about 10 times more to eat ...

it takes three pounds of corn to produce one pound of pig but that's three pounds of largely dry corn to produce one pound of really wet pig... you don't eat the bones so the actual conversion ratio if you're lucky is ten to one, for the steer it's probably twenty to one"

-- Rep. Roscoe Bartlett, May 8, 2006

"Peak Oil and the Environment" conference in Washington, D.C.

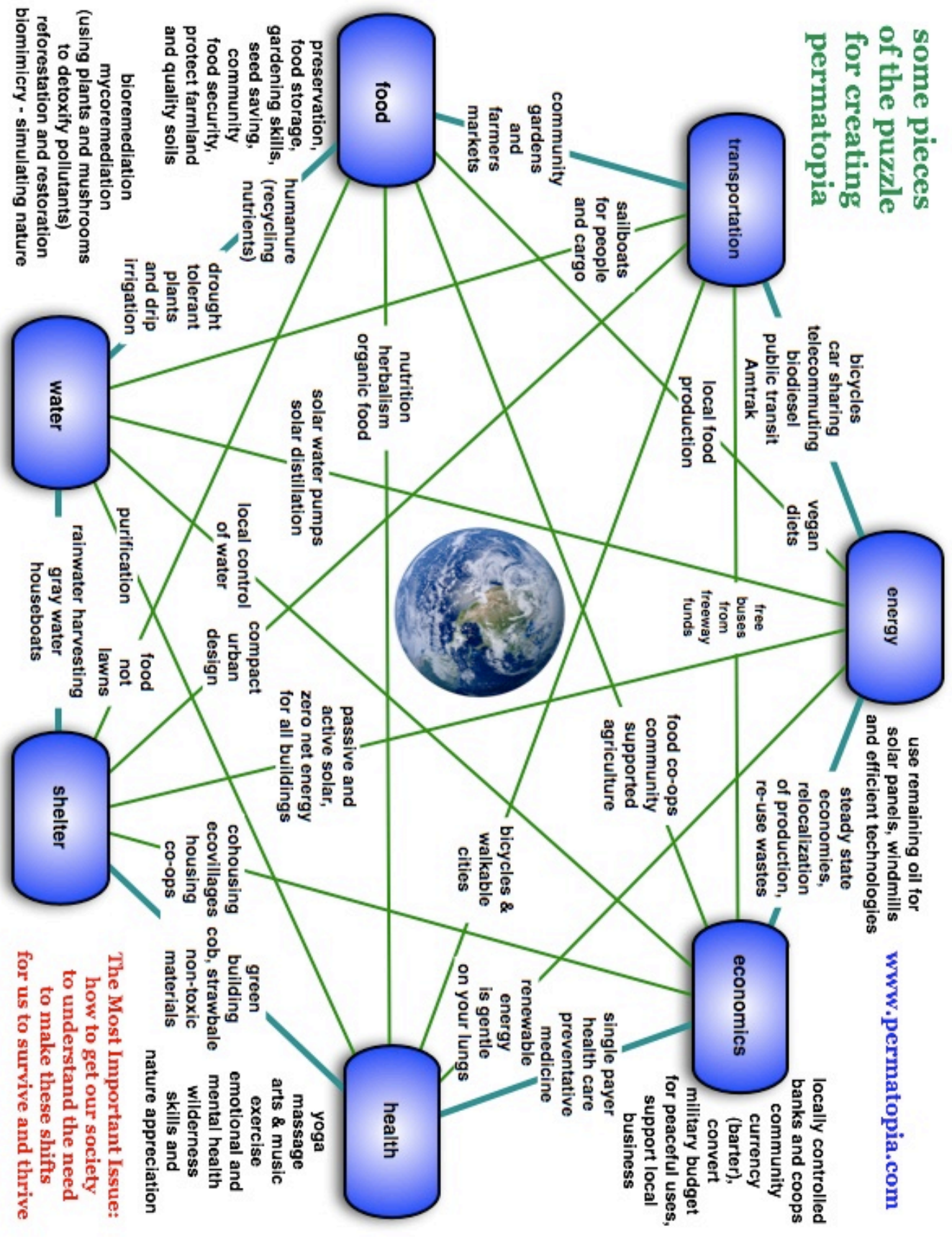
"American feed (for livestock) takes so much energy to grow that it might as well be a petroleum byproduct."

-- "The Price of Beef," WorldWatch, July/Aug 1994



# some pieces of the puzzle for creating permatopia

[www.permatopia.com](http://www.permatopia.com)



**The Most Important Issue:**  
 how to get our society  
 to understand the need  
 to make these shifts  
 for us to survive and thrive

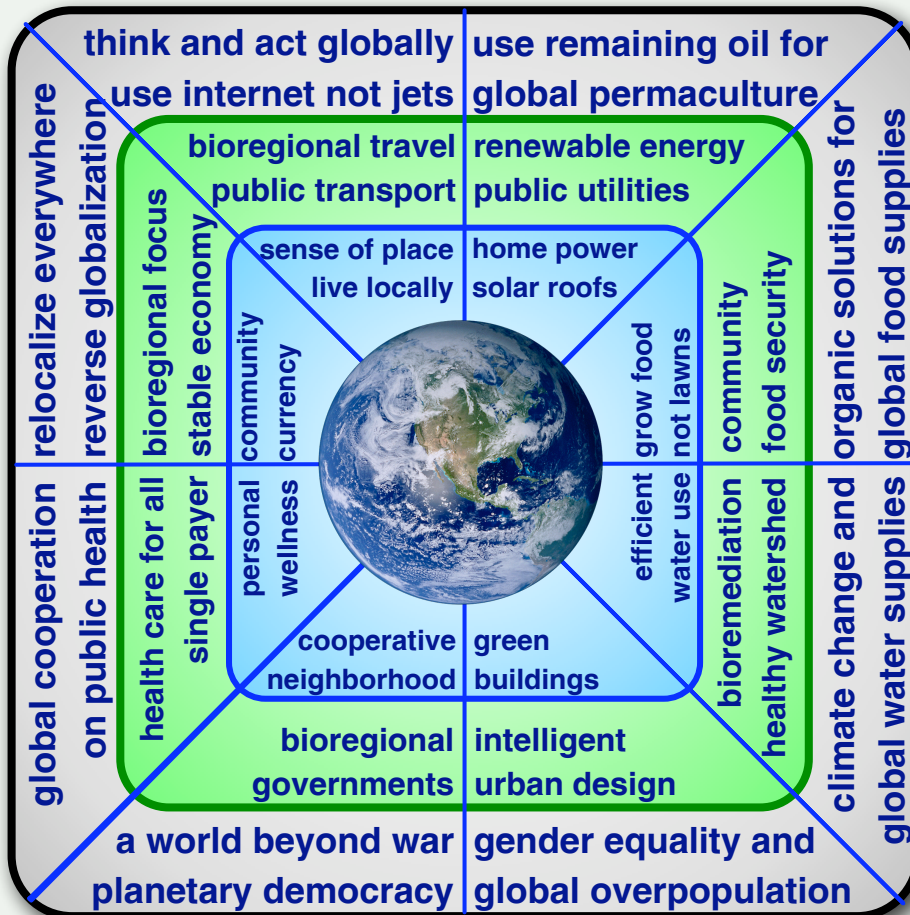


The primary reason for the resource grab marketed as "The War on Terror" and the related "Homeland Security" surveillance system is an elite understanding that Peak Oil and Climate Change will reduce food and water supplies with tremendous consequences for billions of people dependent on industrial agriculture. Humanity is at the precipice of allowing a global totalitarian approach to manage the crisis, or converting the military industrial complex, transnational corporations, global financial markets, and the media toward a planetary scale "global permaculture" response. The scale of the crisis is the largest in the history of civilization, so the response to these interconnected problems also needs to be the largest in the history of our species.

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