It's the energy and the economy, stupid
An open letter to US policymakers

By William Clark

December 28, 2006

> "This is very important….I never had a security briefing which said what some of these very serious, but conservative petroleum geologists say, which they think that, either now or before the end the decade's out, we'll reach peak oil production globally, and with the rise of China and India and others coming along, unless we can dramatically reduce our oil usage, we will run out of recoverable oil within 35 to 50 years. And that would mean that…in addition to climate change, we have a very short time in the life of the planet to turn this around….we may not have as much oil as we think. So we need to get in gear."
>
> — Former President Bill Clinton, Aspen Ideas Festival, July 2006 [1]

The 21st century will likely be defined by three overarching forces: climate change, Peak Oil, and macroeconomics. The twin issues of climate change and Peak Oil are intertwined variables, and each represent extremely important phenomena that have slowly gained some public awareness. However, the third issue, macroeconomics, and more specifically the global trends regarding multiple *petrocurrencies* remains essentially unreported by the five US corporate media conglomerates.

Despite the general lack of public debate, the geopolitical landscape of this young century is increasingly being driven by escalating competition for energy supplies before global oil production peaks, and the erosion of dollar hegemony with the emergence of new petrocurrency alignments. The hypothesis outlined in *Petrodollar Warfare; Oil, Iraq and the Future of the Dollar,* is that the tragic war in Iraq is unfortunately the first oil-depletion and oil-currency war of the 21st century. [2]

Indeed, the geostrategic drivers behind the current "Iran crisis" are essentially the same as the previous "Iraq crisis," including: structural imbalances in the global economy, which is being exacerbated by the weak US dollar, and the emerging liquid fuel energy crisis that will inexorably follow the peak in global oil production. The fact is that the post-World War II status of the US dollar as premier world reserve currency is quietly but assuredly eroding. [3] There are three key variables to analyze concerning the changing status of the dollar's reserve role in the global financial system:

1. Central banks may shift their reserves out of dollars (e.g. into euros, Asian currencies, etc.)
2. The Asian currencies could end their pegs to the US currency (e.g. China circa July 2005)
3. We could witness a breakdown in the pricing of commodities in dollars (e.g. a "basket of currencies" for global oil trade including the dollar, euro, ruble, renminbi and perhaps rial).

All three of these trends have become evident. Regarding the third item, the most important globally traded commodity is oil, and this is where erosion of the dollar's world reserve currency status is significant. [4] This segues into the larger issue of geopolitics, and corresponding attempts by Washington to retain its hegemonic status as the world's sole superpower. A careful analysis of the macroeconomic, geopolitical, and geological trends indicates that over the next few years we will witness a continued decline of US dollar/petrodollar supremacy, and almost certainly a peak in global oil production between 2010 and 2015. Mitigating these trends before they become a *fait accompli* should be the focal point of every major policy-maker in both the domestic and international realms.

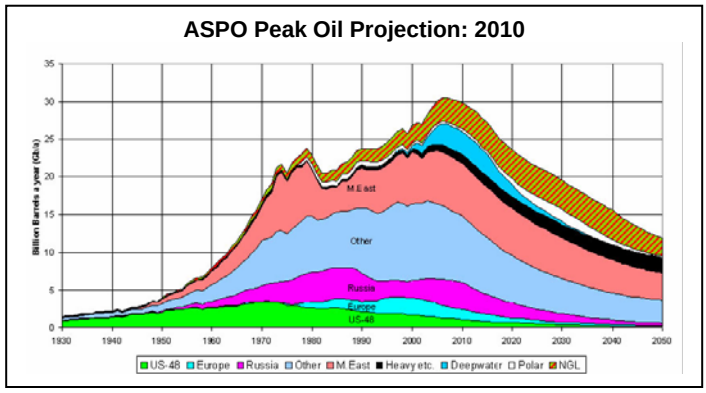
The ill-fated unilateral invasion of Iraq that was designed to maintain US dominance of the global oil supply and enforce petrodollar supremacy — has had the ironic effect of encouraging momentum towards petroeuros and other petrocurrencies — along with new geopolitical and energy alignments unfavorable to the US. [5][6][7][8] In the meantime, the American military is trapped in a tragic quagmire in Iraq, even as the Bush-Blair administrations are once again obfuscating their real geostrategic and macroeconomic agenda regarding Iran by engaging in a propaganda campaign about an Iranian "nuclear weapons program" that according to both the IAEA and CIA simply does not exist. [9]

Regrettably, America's current domestic energy and monetary policies are unsustainable, and US geostrategy is at odds with the interests of global stability: the two greatest challenges facing the world today are the need for global energy reconfiguration and monetary reform. The success or failure to create multilateral accords towards these two colossal undertakings will be the drivers of war and peace, and thereby define the human condition during the opening decades of the 21st century.

Peak Oil: The Energy Conundrum

> The occasion is piled high with difficulty, and we must rise — with the occasion. As our case is new, so we must think anew, and act anew. We must disenthrall ourselves, and then we shall save our country.
>
> I am a firm believer in the people. If given the truth, they can be depended upon to meet any national crisis. The great point is to bring them the real facts.
>
> — Abraham Lincoln, US President 1861–1865

The US Department of Energy's (DOE) National Energy Technology Laboratory commissioned a report on the risks of Peak Oil and strategies to mitigate them; Robert Hirsch of Science Applications International Corporation and his colleagues submitted the report to the DOE in February 2005. [10] This landmark document has yet to generate any official comment by the Department of Energy, the executive branch, or the corporate media, but its conclusion unequivocally states that effective mitigation of global Peak Oil requires global "crash action programs" that are implemented at the maximum possible rate, preferably started 20 years *before* the peak in global oil production. [11] Considering that geologists in the Association for the Study of Peak Oil & Gas (ASPO), and analysts at the Oil Depletion Analysis Center (ODAC), both predict that Peak Oil will occur around 2010 (see graph) — effective mitigation of Peak Oil requires *immediate* action.



As Abraham Lincoln once stated: "We can not escape history…As our case is new, we must think anew, and act anew." This is especially true with regard to mitigating the global Peak Oil crisis. The mindset of market fundamentalism is inappropriate for making energy policy. The Hirsch report explicitly noted that "market price signals" will occur too late because the lead times required to change our liquid fuel infrastructure will be measured not in years, but in *decades*. Importantly, Hirsch and his colleagues conclude that "Intervention by governments will be required, because the economic and social implications of oil peaking would otherwise be chaotic" and that *trillions* of dollars will be required to develop alternative transportation fuels and associated infrastructure. [12]

Moreover, in September 2005 the US Army Corps of Engineers published an 86-page report offering a realistic assessment of the Peak Oil crisis. Once again, like the "infamous Hirsch report," neither the US corporate media nor any US government official has commented on this document. Nevertheless, considering its surprisingly candid conclusions, an extended excerpt is warranted:

> Throughout the 20th Century, the United States has been a profligate energy consumer. The rapid and expansive growth of the economy was based on cheap and abundant energy. *Little thought and planning have been given to how to transition to the realities of the 21st Century when petroleum and natural gas resources will become depleted*. The U.S. economy uses 50 percent more energy per unit of GDP than the other developed nations of the world (EIA 2004). *The fossil fuel-based, automobile-centered, throw-away economy is not a viable model for the United States or the rest of the world over the long term. It is not sustainable.*
>
> ….In the mid-term the world market for natural gas is limited by demand, not by supply….[However] *In the long run, natural gas will reach a peak of worldwide production and decline as a resource starting in the 2030-2035 time range.*
>
> The oil market will remain fairly stable, but with steadily increasing prices as world production peaks. Demand now exceeds production and we are seeing that effect on prices. *After the peak is reached, geopolitics and market economics will result in significant price increases above what we have seen to date*. Security risks will also rise. To guess where this is all going to take us would be too speculative. *Oil wars are certainly not out of the question*.
>
> ….We must act now to develop the technology and infrastructure necessary to transition to other energy sources. Policy changes, leap ahead technology breakthroughs, cultural changes, and significant investment is requisite for this new energy future. *Time is essential to enact these changes. The process should begin now.* [13] [emphasis added]

The imperatives of energy reconfiguration and monetary reform require that the overblown US military expenditures of over $450 billion per year be reduced by at least 50 percent; even $200 billion per year is comparable to the combined military expenditures of the EU and Russia combined. Alternatively, energy reconfiguration would require trillions in new investment, but with the benefit of creating new domestic jobs that will be safe from overseas outsourcing.

If US policymakers and other world leaders commit the mistake of letting the "invisible hand of the market" decide this issue, they may ultimately be condemning millions of people across the globe to an unnecessarily brutal life of poverty, desperation, and premature death from starvation or global resource warfare over oil and natural gas. Simply put, too much of US infrastructure is dependent on oil and natural gas inputs to allow for a market-based correction. The resulting market failure would create huge escalations in the price of virtually everything, and certain critical items, such as food, might soon become prohibitively expensive for a large segment of society.

Unfortunately, it is not hyperbole to advocate the immediate full-scale reallocation of hundreds of billions of tax dollars towards essentially draconian policies of restructuring our energy infrastructure. Logically, the US should apply what is left of its capital and tax base toward this goal — and certainly not to tax cuts for the wealthiest or to expanding the global network of US military bases. Of course, achieving a much less energy-intensive society will depend on Americans' willingness to make sacrifices similar to those during WWII (i.e., rationing of oil and other resources, "victory gardens," etc).

It is too soon to tell if the recent Democratic takeover of the Congress will have any meaningful impact on US energy policy over the next two years, but nothing less than a *revolutionary* course correction is required. For starters, Congress should follow Germany's lead by legislating a bold "25 by 25 plan" (i.e., 25 percent renewable electrical energy by the year 2025). [14] Concerning the 2008 election, it is critical that the next president abandon military force and covert operations as our national energy strategy, and instead pursue massive national energy projects utilizing all forms of renewable energy, while advocating peace and global stability through multilateral accords.

Recommended Reforms: Escaping the Destiny of Empires

> Great Powers in relative decline instinctively respond by spending more on 'security,' and thereby divert potential resources from 'investment' and compound their long-term dilemma.
>
> — Historian Paul Kennedy describing "imperial overstretch" in *The Rise and Fall of Great Powers* (1989) [15]

In his classic study of empires, *The Rise and Fall of Great Powers: Economic Change and Military Conflict from 1500 to 2000*, Yale historian Paul Kennedy observes that when great powers begin to decline, they almost invariably resort to war and belligerency, thereby accelerating their demise as they waste their national treasuries on military spending to the detriment of their economies and their peoples. Kennedy described this pattern as "overstretch." The United States is not immune to these historical patterns — the ultimate legacy of the 2003 invasion and occupation of Iraq — may in time be viewed by future historians as the pivotal event that solidified our own classical "imperial overstretch."

To save the American experiment and stop our slide towards an authoritarian and militant empire, we will need to elect an enlightened president in 2008. Nothing less than revolutionary changes are needed of the political landscape. Regrettably, both political parties appear to be different factions representing the same richest two percent of the population, and both espouse an imperial agenda. Their prime constituency is the elite that funds their political campaigns, which is the powerful and unaccountable military–industrial–petroleum–banking conglomerate. This is the natural result of a structurally flawed campaign finance system that renders much of Congress and the president incapable of voicing the concerns and interests of the other 98 percent of Americans.

There is no easy way out, and I do not envy the arduous journey that awaits the 44th president, who will likely face a combined economic and energy crisis. Global monetary reform, including a compromise with the EU regarding the world reserve/petrocurrency issues, implies that the US will have to forfeit its superpower status and revert to being one nation among equals. Many Americans do not want to hear this message, but unless this bitter pill is swallowed, the US economy may experience a disorderly decline, inducing far more pain than would be experienced via multilateral compromises for controlled contraction. Regardless, we may not have the luxury of choice for much longer, as the dictates of the global economy and physics will soon come to the forefront.

The only solution is international cooperation, real US leadership based on sustainable fiscal and energy policies, implementation of a phased but rapid strategy to adjust to oil and gas depletion, reform of the global monetary system, and behavioral changes to reduce our gluttonous addictions to oil and debt. The five US media conglomerates are not serving the public's interest and should be broken up by anti-trust legislation. Comprehensive campaign finance reform that rejects the flawed concept of 'corporate personhood' is needed if Congress seeks to enact the required energy reforms.

To save the American experiment from the shared destiny of all empires — military overextension and subsequent economic decline — I recommend the following six measures.

1. Disavow the Preventive War Doctrine. The unrealistic neoconservative goal of global domination must be quickly discarded by any new US administration if it hopes to relieve current and future geopolitical tensions. The concept of the US openly violating international law with unilateral "preventive wars" in the oil-rich regions of the world will simply not be tolerated by other industrialized nations. One of the first official acts of the next president should be to officially disavow the "Bush doctrine" and state a desire for a multilateral approach to international relations, including a revamped anti-terrorism campaign utilizing INTERPOL. These are critical gestures needed in order to diffuse the tensions between the US and Iran. Such a policy change would let the world community breathe a collective sign of relief and extend to the new administration much-needed political capital.

2. Launch International Energy Projects. Washington should propose to the UN that it form an international consortium of energy scientists and engineers to develop alternative fuels for transportation. The evidence supporting global supply limitations is building. In April 2006 a Saudi Aramco spokesman stated that despite all efforts to maintain production, they expect on average a 2 percent annual decline from Saudi's mature oil fields. [16] If true, world oil production will simply *not* be able to expand enough to meet projected demand by 2010 and beyond. If alternative fuels for transportation cannot be developed and implemented over the next decade, disaster will follow, including major disruptions in global food supplies. Ideally, the G8 nations plus China and India would immediately advocate the investment of hundreds of billions of dollars in UN-coordinated international energy programs with the urgency of the Manhattan and Apollo projects. The following technologies pursuant to energy reconfiguration should be vigorously developed and implemented:

Short-term "bridge technologies" and other energy reforms (present day to 2020)

- Ultra fuel-efficient gasoline and diesel engines (vehicles exceeding 60 mpg).
- Clean-coal technology with mitigation of carbon dioxide emissions to power electricity-based transportation systems (light rail systems, plug-in hybrids, etc).
- Massive light-rail projects, including using land currently used by the Interstate Highway System (preferably driven by electrical power generated with renewable energy).
- Aggressive agricultural programs to reduce fossil-fuel inputs (fertilizers and pesticides) and dramatically increased localized, organic food production.
- Wind power (rapid deployments in both small and large-scale settings).
- Massive solar-energy/photo-voltaic retrofitting of residential and commercial buildings.

Intermediate to long-term energy projects utilizing renewable energy (2010 to 2030)

- Large-scale deployments of Geothermal and ground-source heat pumps (retrofitting both commercial and residential buildings).
- Biomass and biodiesel limited to localized, agriculture-based farm production and food distribution (technology is non-scalable for mass transit use due to low energy return on energy invested or EROEI, and should be restricted to food production and distribution).
- Wave and tidal power systems for electricity generation in the coastal regions.

Research & Development for long-term energy systems (2020 and beyond)

- Ocean Thermal Energy Conversion (OTEC) (e.g., fleet of 50 to 100-megawatt floating "plant-ships" producing liquefied ammonia for hydrogen fuel cells and potable water).
- Hydrogen/ammonia fuel cells for mass transit via non-fossil fuel-based energy systems.
- Thermal depolyermization (new technology that warrants more R&D).
- Holistic environmental and EROEI analysis of improved breeder reactors that recycle uranium by-products and continued R&D on nuclear fusion (still unproven technology).

3. Implement the Oil Depletion Protocol. The UN should immediately convene an international group of scientists, engineers and agriculturalists to study fossil-fuel depletion. Under UN supervision, the global community should devise a methodology and formal agreements regarding the distribution of hydrocarbons based on the global depletion rate. Richard Heinberg recently published his third book on Peak Oil, *The Oil Depletion Protocol: A Plan to Avert Oil Wars, Terrorism and Economic Collapse,* which provides a blueprint explaining the necessity of implementing a global oil-depletion treaty, and how such an accord would be implemented to produce a graduated worldwide reduction of oil consumption while preserving some level of oil price stability. [17] Colin Campbell, a retired petroleum geologist who founded ASPO, along with his colleagues, devised the idea of the Oil Depletion Protocol. This proposal incorporates two difficult, but completely logical, recommendations:

- No country shall produce oil at above its current Depletion Rate, such being defined as annual production as a percentage of the estimated amount left to produce;
- Each importing country shall reduce its imports to match the current World Depletion Rate, deducting any indigenous production. [18]

Successful implementation of such a worldwide treaty would seem miraculous; yet the incentive to abide by such an accord is the inescapable fact that the alternatives are either global oil-depletion warfare or economic warfare in the international foreign-exchange markets. These adverse events can be avoided, but only if the international community can agree to such an energy treaty while also transforming the current economic and monetary systems. In addition, the 20th century suggests a correlation between hydrocarbon-based energy production and overall population growth, therefore humane measures to stabilize, and then gradually reduce, global population levels appears warranted.

Regarding the United States, it is essential that Americans use less fossil-fuel energy and immediately improve our infrastructure before the full effects of Peak Oil make any energy reforms unbearably painful and chaotic. Given that the US consumes 25 percent of all hydrocarbons, Americans have the most to lose if energy reforms are not implemented while we still have the ability to pursue a gradual “Powerdown” scenario. [19] Michael Meacher, former member of Parliament and UK environment minister from 1997 to 2003, stated the obvious in his article, “Bottom of the Barrel”:

> The conclusion is clear: if we do not immediately plan to make the switch to renewable energy — faster, and backed by far greater investment than currently envisaged — then civilisation faces the sharpest and perhaps most violent dislocation in recent history. [20]

With increasingly limited choices, the US must seek policies that could mitigate this transition into a graduated approach where possible, and a rapid approach where needed. Peak Oil is a global crisis, and given that reality — multilaterialism rather than unilateralism — is the only way to create a peaceful outcome. On a positive note, the implementation of the Oil Depletion Protocol has the potential to facilitate the goals of the Kyoto Treaty and slowly begin mitigating global climate change by decreasing levels of CO_2 production that result from burning petroleum-based hydrocarbon fuels.

4. Restore Fiscal Discipline. Washington must restore some semblance of fiscal responsibility if it wants to save the dollar. The Iraq conflict has cost almost $600 billion by 2006, with the true long-term cost of the conflict reaching up to $2 trillion. [21] Similar to the draining of US gold reserves during the Vietnam War, the devaluation of the dollar from 2002 to present day reflects the world’s lack of faith in US economic and foreign policies. The creditworthiness of a currency is based on the ability of the government to collect tax revenue from its citizens. At a minimum, repealing large portions of the clearly unaffordable 2001 and 2003 tax cuts could facilitate a balanced cash budget. Fiscal discipline

also requires a substantial scaling back of money currently wasted on our unproductive global military superstructure, starting with the 14 new US military bases inside Iraq that are driving the insurgency.

5. Revitalize the US Manufacturing Base with Energy Reconfiguration. Alan Greenspan, the former chairman of the Federal Reserve, gave Americans the peculiar impression that it does not matter where American products are made, as long as people can continue to buy them. Nothing could be further from the truth. The loss of over 3 million US manufacturing jobs since 2000 has led to decreased real income, growing personal debt, and record numbers of personal bankruptcies. A superpower that loses its manufacturing base will not be a major power for very long.

The most viable careers in the 21st century will likely revolve around the "green" job sector. The US must substantially invest in alternative/sustainable-energy technologies, and other export sectors to gradually but earnestly move the economy from a trade deficit back to a trade account surplus. This will take decades, but the imperative for large-scale domestic energy reconfiguration projects and the deployment of alternative energy would provide the US with new employment opportunities that would be safe from overseas outsourcing, while also enhancing our long-term national security.

6. Reform the Global Monetary System. The main problem with the current global economy is that excess levels of credit creation (i.e., credit/derivative bubble) have facilitated the building of supply capacity that is well beyond the requirements of global aggregate demand. Conventional economic theory suggests that a period of deflationary contraction would permit a decline of supply capacity until growth in demand initiates a new expansionary cycle. Economists like Richard Duncan, author of *The Dollar Crisis* have argued that excessive growth in global credit and subsequent structural problems of the US dollar may unleash a deflationary contraction of the global economy. [22] A depression accompanied by steep devaluation of the dollar could follow, and the downturn could last until global aggregate demand, particularly in the EU and East Asian economies, finally increased again, a process that might take many years.

Therefore it seems imperative that the US government begin discussions with the G8 nations plus China to reform the global monetary system, ideally to allow for a controlled expansion of markets in Europe and East Asia. The global economy will be more balanced and better off with three engines of global growth: the US, the EU, and Asia/India. The great challenge will be to implement a gradual, controlled decrease in the growth of the US money supply while attempting to minimize dislocations in the US and global economies. The first reform should be to make the euro the second international reserve currency, at parity with the dollar for oil transactions, thereby allowing a dual OPEC oil-transaction currency standard.

While these reforms are necessary to create a more balanced global economy, any broad transition from a dollar to a euro or euro-dollar standard, with subsequent enormous capital-market reorientation will be forcefully opposed by the US political and business establishments. Nevertheless, given US trade and fiscal imbalances, the ascendance of the euro as a world reserve currency and alternative petrocurrency, followed by a convertible Russian petroruble in 2007-2008, and perhaps within a decade a fully convertible Chinese renminbi, seems inevitable.

Simply stated, the US consumer cannot go into indefinite debt as the single engine for global growth, nor can the Federal Reserve continue to re-inflate bubbles forever. Both the EU and East Asia will have to recognize that the "party is over" and that they cannot ride the American consumer in perpetuity. Whether or not they wish to confront the challenges of this transition voluntarily, it will ultimately be imposed on them by brutal economic realities.

Conclusion

> In the end, the choice [between] these two alternatives — Grab the Oil or Energy Reconfiguration — this decision is much bigger than oil alone. It is a choice about the fundamental ethos and, in fact, the very nature of the country. Most immediately, it is about democracy versus empire. In economic terms, it is about prosperity or poverty. In engineering terms, it is a matter of efficiency over waste. In moral terms this is the choice of sufficiency or gluttony. From the standpoint of the environment, it is a preference for stewardship over continued predation. In the ways the US deals with other countries it is the choice of co-operation versus dominance. And in spiritual terms, it is the choice of hope, freedom and purpose over fear, dependency and despair. In this sense, this is truly the decision that will define the future of America and perhaps the world.
>
> — Robert Freeman, "Will the End of Oil Mean the End of America?," 2004 [23]

This essay is intended to inform others of the challenges and choices that are directly ahead. Two decades of wasteful US fiscal and energy policies have placed the US at risk for an economic downturn of considerable depth and duration, and we are woefully unprepared as a nation to reduce our fossil-fuel consumption. Unfortunately, recent US foreign policies are exacerbating global tensions and could lead to even worse warfare than the Bush years have already wrought. Their must be no misunderstanding — global resource warfare *will* ultimately leave even the so-called "winner" in a ruined state of energy deprivation along with economic and moral bankruptcy.

This need not be the case, but global Peak Oil is undoubtedly the test that will define the human condition in this new century. As Robert Freeman observed, the destiny of the US will be decided by how willing the American people are able to adjust to the realities of hydrocarbon depletion. The reduction of fossil-fuel consumption and the transition to a more sustainable energy paradigm will be decades long and very difficult, but our generation can not escape these facts.

Americans are largely blinded by government propaganda and a pervasive corporate media bias that is subtly imperialist and very often filtered, thus rendering the People unaware that terrorism and other international frictions are too often the result of 50 years of US meddling overseas, including the overt or covert replacement of governments with puppet regimes and dictators. [24] America's uncritical support of Israel's policies is also not in the interest of anyone's long-term national security. This combination of foreign policies, as practiced under both Republican and Democratic administrations, has produced increasingly painful levels of blowback.

Regrettably, the US electoral system has broken down under its current funding mechanisms, and the corporate media conglomerates have become the docile handmaidens who excessively filter the daily news to favor the status quo and the interests of the elite. As a result both political parties appear incapable of initiating the needed reforms. This must change, and time is running short. Most importantly, the American people — especially those in Congress — must not allow the executive branch to cynically use the "war on terror" as a tool of fear to gain our complicity for more unprovoked resource and petrocurrency wars. The US military should not and cannot be used to enforce the petrodollar system. Current US-led antagonism toward Iran should be replaced by negotiations regarding its nuclear energy program and a compromise with the EU, Russia, and OPEC regarding a graduated implementation of a multiple-petrocurrency global economy.

Failure to pursue multilateral reforms will result in increasing levels of societal disorder, endless war that requires military conscription, increased levels of political deception and repression at home,

ultimately ending with moral and economic bankruptcy. The only rational strategy is to compromise our hegemonic status and pursue multilateral treaties. This would require politicians to disavow today's imperial conquests and focus instead on managing our decline. Unfortunately, I remain quite skeptical that the reforms I have proposed will happen until a global crisis occurs, thereby forcing these monetary and energy issues to the negotiating table.

Indeed, the real struggle for the United States is internal. Can we return to our republican origins and restrain ourselves from empire building? Can we rejoin the community of industrialized nations as an equal? The ultimate test for the American experiment: *Can we once again begin living within our means from both fiscal and energy perspectives?* Do we have the will and the wisdom to reduce our oil and gas consumption and engage in what Heinberg calls "powerdown"? [25] If the US could rise to that level of enlightenment, our problems with anti-Americanism and terrorism would quickly subside.

This analysis proffers that six difficult challenges await the next US administration: (1) developing a national energy strategy to reduce fossil-fuel consumption; (2) negotiating global monetary reform, (3) broadly re-organizing US fiscal policies, (4) repairing damaged foreign relationships with the UN, the EU, the Middle East, Russia, and Latin America by realigning foreign polices with American principles and human rights, (5) reigning in the unwarranted power of the military-industrial-petroleum-banking consortium through comprehensive campaign finance reform, and 6) massive reallocation of public funds from military spending towards energy reconfiguration utilizing renewable energy sources in an attempt to mitigate both Peak Oil and Global Warming. Regrettably, the next President will have to undertake these colossal challenges from a weakened position both economically and diplomatically. I do not envy the arduous journey that awaits the 44th President of the United States.

The beginning of the 21st century will be an epochal moment in history; either a disastrous period of resource-related military and economic warfare or an unprecedented and noble effort at international cooperation. Either way, maintaining the status quo will not be possible much longer due to both physics and macroeconomics, nor is it desirable if we wish to preserve our humanity. Our political, social, and economic choices in the next few years will decide which path we take. Will America succumb to an endless "war on terror," increased militarism, and economic ruin in a desperate attempt to retain its superpower status, or will it rejoin the community of nations as an equal to collectively work on future challenges? Will future historians write that America was just another reckless, selfish empire that collapsed due to imperial overstretch? Or will they sing praises of a long-lived, enlightened democratic republic that finally resisted the temptations and follies of empire — and compromised for peace, sustainability, and the rule of law as it entered the 21st century?

*****

> "*The care of human life and happiness, and not their destruction, is the first and only legitimate object of good government….All tyranny needs to gain a foothold is for people of good conscience to remain silent.…I have sworn upon the altar of God eternal hostility against every form of tyranny imposed upon the mind of man*."
>
> — Thomas Jefferson, United States Founding Father

References:

1. MPR: A conversation with Bill Clinton, (quote begins around the 9:00 minute mark) Minnesota Public Radio, July 11, 2006**,** http://minnesota.publicradio.org/display/web/2006/07/11/midday2 *Note*: According to an interview with David Renmick in *The New Yorker* (September 18, 2006 issue), during the summer of 2006 Bill Clinton read Richard Heinberg's renowned book on Peak Oil, The *Party's Over: Oil, War and the Fate of Industrial Societies* (New Society Publishers, 2005, 2nd edition)

2. William R. Clark, *Petrodollar Warfare: Oil, Iraq and the Future of the Dollar*, New Society Publishers, 2005.

3. Gabriele Galati and Philip Woolridge, “The euro as a reserve currency: a challenge to the pre-eminence of the US dollar?,” Bank for International Settlements (BIS) Working Paper No 218, October 2006, http://www.bis.org/publ/work218.pdf

4. Haig Simonian, Javier Blas, Carola Hoyas, and Peter Garnham, “Oil producers shun dollar,” *Financial Times*, December 10, 2006, http://www.ft.com/cms/s/277471c2-8889-11db-b485-0000779e2340,_i_nbePage=9e03725e-e742-11da-9046-0000779e2340.html

5. “Iran oil bourse launch underway,” *Persian Journal*, September 16, 2006, http://www.iranian.ws/iran_news/publish/article_17773.shtml

6. “Putin proposes creation of ruble-denominated oil, gas exchange,” *RIA Novosti*, May 10, 2006, http://en.rian.ru/russia/20060510/47915635.html

7. “China opens oil bourse in Shanghai,” *China Daily*, August 18, 2006, http://www.chinadaily.com.cn/china/2006-08/18/content_668446.htm

8. W. Joseph Stroupe, “The New World Oil Order: Russia attacks the West's Achilles' heel (Part I),” *Asia Times*, November 22, 2006, http://www.atimes.com/atimes/Central_Asia/HK22Ag01.html Also see: “The New World Oil Order: Russia tips the balance (Part II), *Asia Times*, November 23, 2006, http://atimes.com/atimes/Central_Asia/HK23Ag01.html

9. Dafna Linzer and Julie Tate, “No Proof Found of Iran Arms Program: Uranium Traced to Pakistani Equipment,” *Washington Post*, August 23, 2005; Page A01, http://www.washingtonpost.com/wp-dyn/content/article/2005/08/22/AR2005082201447.html
Also see: Seymour Hersh, “The Next Act: Is a damaged Administration less likely to attack Iran, or more?,” *The New Yorker*, November 27, 2006 Issue, posted online November 20, 2006, http://www.newyorker.com/fact/content/articles/061127fa_fact

10. Robert L. Hirsch, et al, “Peaking of World Oil Production: Impacts, Mitigation and Risk Management,” Science Applications International Corporation (SAIC), February, 2005, http://www.odac-info.org/assessments/documents/hirschreport_002.pdf

11. ibid. Also see the follow-up report by Roger Bezdek, Robert Wendling and Robert Hirsch, “Economic Impacts of Liquid Fuel Mitigation, *misi-net*, May 2006,” http://media.globalpublicmedia.com/RM/2006/05/hirsch2.pdf

12. Robert L. Hirsch, op cited.

13. Donald F. Fournier and Eileen T. Westervelt, “Energy Trends and Their Implications for U.S. Army Installations,” US Army Corps of Engineers: Engineer Research and Development Center, September 2005, http://www.energybulletin.net/13737.html

14. John J. Fialkan, “Renewable Fuels May Provide 25% of U.S. Energy by 2025,” *Wall Street Journal online*, November 13, 2006; Page A10, http://online.wsj.com For details about a “25 by 25” agenda, readers should review: http://www.25x25.org/

15. Paul Kennedy, *The Rise and Fall of Great Powers: Economic Change and Military Conflict from 1500 to 2000,* Vintage, 1989, p. xxiii.

16. Glen Carey, “Saudi Aramco boosts drilling efforts to offset declining fields,” *Platts Oilgram News*, April 11, 2006.
Also see: Matthew R. Simmons, *Twilight in the Desert: The Coming Saudi Oil Shock and the World Economy*, Wiley, 2005.

17. Richard Heinberg and Colin Campbell (Forward)*, The Oil Depletion Protocol: A Plan to Avert Oil Wars, Terrorism and Economic Collapse*, New Society Publishers, 2006

18. The Rimini Protocol: An Oil Depletion Protocol: Proposed by Association for the Study of Peak Oil & Gas, http://www.peakoil.ie/protocol

19. Richard Heinberg, *Powerdown, Options and Actions for a Post-Carbon World*, New Society Publishers, 2004.

20. George Monbiot, “Bottom of the Barrel: The World is Running out of Oil — So Why Do Politicians Refuse to Talk about It?,” *Guardian* (UK), December 2, 2003, http://www.guardian.co.uk/comment/story/0,3604,1097622,00.html.

21. Tom Regan, “Report: Iraq war costs could top $2 trillion,” *The Christian Science Monitor*, January 10, 2006.

22. Richard Duncan, *Dollar Crisis: Causes, Consequences, Cures*, John Wiley & Sons, 2003, p. 168.

23. Robert Freeman, “Will the End of Oil Mean the End of America?” *commondreams.org*, March 1, 2004, http://www.commondreams.org/views04/0301-12.htm

24. Chalmers Johnson, “Blowback,” *The Nation*, posted online September 27, 2001, http://www.thenation.com/doc/20011015/johnson
All see: Stephen Kinzer, *All the Shah's Men: An American Coup and the Roots of Middle East Terror*, John Wiley & Sons, 2004.

25. Richard Heinberg, defined “Powerdown” in the opening page of his book of the same title. **Power-down** \\ n. 1. the energy famine that engulfed industrial nations in the early 21st century 2. the deliberate process of cooperation, contraction, and conversion that enabled humanity to survive.

About the author: William R. Clark is the author of *Petrodollar Warfare: Oil, Iraq and the Future of the Dollar* (New Society Publishers, 2005). He has received two Project Censored awards, first in 2003 for his ground-breaking research on the Iraq War, oil currency conflict, and US geostrategy, and again in 2005 for his research on Iran’s proposed euro-denominated oil bourse. He is an Information Security Analyst and guest lecturer in the U.S. and abroad. He holds a Master of Business Administration (MBA) and Master of Science in Information and Telecommunication Systems (MS/ITS) from Johns Hopkins University. He lives in Rockville, Maryland. Website: www.petrodollarwarfare.com