

and Serbia — that this Pentagon contracting had corruption and disaster written all over it. They were very, very critical, and, of course, what happened to them? The reports received no press coverage; AND NOT only are these companies making billions off Pentagon contracts, but they're using their influence to drive foreign policy, for example, in pressing for an occupation of Iraq intended to get their hands on Iraq's oil.

THAT SHOULDN'T be a surprise to anyone. It's a corporate government. The two parties have consolidated into one corporate body with two heads, one of which happens to be bigger than the other at this point. Corporations are driving U.S. financial policy, and they're driving U.S. foreign policy. They own our political system, from top to bottom. Oil companies, the big defense contractors — they've always been directing foreign policy; but now I think what you've got is a situation where the boundaries between the corporate world and the political world and the military have dissolved.

You're a general in the Pentagon one moment, and at the very same time, you're a lobbyist for Boeing. At the same time you're handing out contracts for weapons systems, you're also working for the companies that are getting the contracts. Finally, you get somebody like Darlene Druyun of Boeing, who takes it a little bit too far. Also, I think there's the fact that she's a woman, and that she had burned a lot of bridges during her days in the Pentagon; but it really took some flamboyantly corrupt behavior for her to get nailed. So, she goes down, and she takes a few of her colleagues with her; but there's no talk of reforming the system. You had your sacrificial scapegoat, and the beat goes on.

It's the same thing with Randy "Duke" Cunningham. Here you had a congressman who was writing down his bribe list on his own congressional stationery pad as he got sloshed in the Dubliner Pub off Capitol Hill — his wish list from the retinue of defense contractors who parade into his office. But again, is there any talk about reform of these relationships between congressmen and lobbyists? Not at all; so, the system is, I think, irretrievably corrupt. The cancer has gone to phase five and metastasized through the body politic, and no one has clean hands.

Senator John McCain may have the best reputation as a reformer and a maverick, but in your book, you describe a different person altogether.

JOHN McCAIN, in my view, is the most fraudulent politician in Washington. He is a complete fraud — from campaign finance reform to his attempts to reform Pentagon pork. The typical McCain thing is to come up with a sound bite about pork-barrel spending at the Pentagon and how outrageous it is but do nothing. You have Senator Ted Stevens of Alaska attaching bills to fund airports in his own name or bridges to nowhere — does McCain object to it? Does he do anything to stop it? No, he doesn't. And this is the Senate, where one senator could monkey wrench the entire system if he wanted to. What McCain wants is the reputation as a maverick. He knows as well as anyone, being the son of an admiral, that he needs the support of the defense-imperial complex.

EVEN AMONG people who genuinely oppose the U.S. war on Iraq, there's a perception that the preceding war on Afghanistan to topple the former Taliban government was a good thing; but your book tells a different story.

BASICALLY, THE U.S. was offered Osama bin Laden and his inner cabal. The Taliban offered them up, and the Bush administration refused. We interviewed the intermediary for the Taliban. They wanted to get rid of bin Laden. He was a huge liability to the Taliban. It began in Clinton times and really picked up steam after September 11, and both the Bush and Clinton administrations' response was: "He's useful to us." There's no question they wanted war. Afghanistan was a kind of a replay of the wars from Clinton times. It was an air war and a cruise missile war. The U.S. had a proxy army in the Northern Alliance that they could work with, along with a few Special Forces divisions, the CIA, and the interrogators/torturers.

They weren't suffering under any illusions about rebuilding Afghanistan as a model of democracy. Basically, what they wanted was to set up a government there quickly, and then get the hell out, because their grand ambition was in Iraq. There were flirtations with pipelines and military bases, but I think they needed a kind of fire show in Afghanistan, which they got. But it still turned into a quagmire. I think the death and injury

rate for U.S. soldiers in Afghanistan is inching up now, so that it's getting close to what it is in Iraq, and that's totally uncovered in the media. Ninety percent of the people in this country don't know that we're even in Afghanistan any more, but it's sucking them down slowly and silently.

IN IRAQ, all the pretexts for the invasion — weapons of mass destruction, promoting democracy — have crumbled. So who was it that really benefited? I think it's evident to everyone now that we're not dealing with rational people, and that we do have morons running this government. They're political morons, and they're inept at what they're doing, militarily and strategically. It has been a resume of failure unlike anything I've ever seen in politics. So, you're asking for a kind of rational explanation of the motives behind this war, and I don't think that there is one.

You have the neoconservative agenda, for one; but on the other hand, you have to recognize that Dick Cheney isn't a neocon. He has neocons in his office, but he isn't one himself. Bush isn't a neocon. Rumsfeld isn't a neocon. Powell and Armitage weren't neocons. I think the left gets fixated on the neocons, instead of what I think is the one rational motivation that you can pick out — economic control of the Middle East. The administration wants to laugh about the war not being about oil. I don't think it is all about oil, but look at the profits of ExxonMobil. Croesus would have been envious. Wal-Mart is road kill in their wake.

It goes way beyond oil. Right now, you have the last vestige of Keynesian economics at work in the billions of federal dollars being spent in these Pentagon contracts. It's an astounding transfer of wealth — the likes of which I don't know that we've ever seen. The war has been very good for the oil companies, and it's been very, very good for the defense companies. One thing that we have to realize now is that we've gone way beyond the traditional defense companies, like Boeing and Lockheed. Now, the dot-coms are defense companies. The contracts have been saturated across the economic spectrum. If you're a corporate CEO, and you haven't found out a way to become part of this orgy of spending from the Department of Homeland Security to the Pentagon, you should be fired by your board of directors, because it's all there for the taking.

To a certain extent, I think this has created a fissure within the Pentagon, because there's a price that's going to be paid. The original idea was that we could cut taxes and have these wars, because we'd take over Iraq, and the war would pay for itself. The U.S. knew they didn't have any weapons of mass destruction. We don't go to war against countries that have weapons of mass destruction. Iraq was a kind of prisoner country, battered by sanctions and 13 years of war before "Shock and Awe"; and it has one of the largest untapped oil reserves in the world, which had been off the market. So, the war would pay for itself, because we would have our hands on all of that oil.

We could get production up and going, thanks to handing out big contracts to Parsons and Halliburton and Bechtel. We would sell that oil on the market and use those revenues to pay for the war. Well, they were in for a surprise — that didn't happen. Now, the cost of this war is reaching into the trillions of dollars. So what's happened is that there's a kind of civil war in the Pentagon.

You have the traditional defense companies, like Boeing, Lockheed, and Raytheon, who are building the baroque weapons systems that are relics of the Cold War, but we haven't stopped building them yet. Like the F-22 fighter, there's no enemy for this, unless we're invaded by aliens, Star Wars, or the joint strike fighter, and all these big stealth systems from when everybody was into stealth. All you had to do was attach the name "stealth" to any project or weapons system, and you immediately got billions in contracts.

Those days may be gone. For a lot of these generals, particularly in the procurement office in the Pentagon, their mission in life was to steer those big contracts to the defense companies. They would get their two or three stars, they would retire, and they would go to work for Boeing and Lockheed and become millionaires and powerbrokers. Now, those big projects are being put at risk, because of the fact that the Afghanistan and Iraq Wars can't pay for themselves. You have this new retinue of contractors, like the Halliburtons, which are getting the reconstruction and logistics contracts. They've now become almost as powerful as the old-line defense contractors. So there's a kind of civil war going on inside that microcosm.

Energy security rests on two principles: (1) having less energy to provide needed services, and (2) having access to technologies that provide a diverse supply of reliable, affordable, and environmentally sound energy. Many forms of energy production depend on the availability of water, e.g., the production of electricity at hydropower sites in which the kinetic energy of falling water is converted to electricity. Thermal power plants, in which fossil, nuclear, and biomass fuels are used to heat water to steam to drive turbogenerators, require large quantities of water to cool their exhaust streams. The same is true of geothermal power plants. Water also plays an important role in fossil fuel production via injection into conventional oil wells to increase production, and its use in production of oil from unconventional oil resources such as oil shale and tar sands. In the future, if we move aggressively towards a hydrogen economy, large quantities of water will be required to provide the needed hydrogen via electrolysis.

Water security can be defined as the ability to access sufficient quantities of clean water to maintain adequate standards of food and goods production, sanitation, and health. It is of growing importance because the world is already facing severe water shortages in many parts of the developing world, and the problem will only become more widespread in the years ahead, including in the U.S. Just as energy security became a national priority in the period following the Arab Oil Embargo of 1973-74, water security is destined to become a national and global priority in the decades ahead.

Central to addressing water security issues is having the energy to extract water from underground aquifers, transport water through canals and pipes, manage and treat water for reuse, and desalinate brackish and sea water to provide new water sources.

Other indirect linkages between energy and water exist as well. Energy production and use produces emissions that can pollute surface and underground water supplies. The ability to move freight via inland waterways impacts the amount of energy required to move our nation's goods, because movement by waterway is much less energy-intense per ton than the alternatives of rail and truck. If competing water uses limit use of such waterways, we will use more energy to move our goods and energy security will be impacted.

The problem is that 96%, or 317 million cubic miles, is found in the oceans and is saline (35,000 ppm of dissolved salts). Another 7 million cubic miles is tied up in icecaps and glaciers, and 3.1 million in Earth's atmosphere. Ground water, fresh water lakes, and rivers account for just over 2 million cubic miles of fresh water. The net result is that 99.7% of all the water on earth is not available for human and animal consumption. Of the remaining 0.3%, much is inaccessible due to unreachable locations and depths, and the vast majority of water for human and animal consumption — much less than 1% of the total supply — is stored in ground water.

An important feature of Earth's supply of fresh water is its nonuniform distribution around the globe. Water, for which there are no substitutes, has always been mankind's most precious resource. The struggle to control water resources has shaped human, political, and economic history, and water has been a source of tension wherever water resources are shared by neighboring peoples. Globally, there are 215 international rivers and 300 ground water basins and aquifers shared by two or more countries.

Population growth and economic development are driving a steadily increasing demand for new water supplies, and global demand for water has more than tripled over the past half century. Globally, the largest user of fresh water is agriculture, accounting for roughly three quarters of total use. In Africa, this fraction approaches 90%. In the U.S., agriculture accounts for 39% of fresh water use, the same fraction used for cooling thermal power plants.

Future prospects are not encouraging. Global water withdrawal in 2000 is estimated to be 1,000 cubic miles (4,000km³), about 30% of the world's total accessible fresh water supply. By 2025, that fraction may reach 70%. Overpumping of ground water by the world's farmers already exceeds natural replenishment by more than 160 km³, 4% of total withdrawals.

How serious is the situation today? The World Health Organization estimates that, globally, 1.1 billion people lack access to clean water supplies, and that 2.4 billion lack access to basic sanitation. 1,000 m³ is the per capita annual amount of water deemed necessary to satisfy basic human needs. In 1995, 166 million people in 18 countries lived below that level. By 2050, potable water availability is projected to fall below that level for 1.7 billion people in 39 countries. Water shortages now plague almost every country in North Africa and the Middle East.

How much energy is needed to provide water services? As stated earlier, energy is required to lift water from depth in aquifers, pump water through canals and pipes, control water flow and treat waste water, and desalinate brackish or sea water. Globally, commercial energy consumed for delivering water is more than 26 Quads, 7% of total world consumption.

Sustainable withdrawal of fresh water is currently an issue in the U.S. The fast growing demand for clean water, coupled with the need to protect and enhance the environment, has already created shortages in some parts of the U.S. and will make other areas of the U.S. vulnerable to water shortages in the future. For example, California's allocation of Colorado River water has been reduced because competing urban, agricultural, and environmental interests could not agree on a conservation plan. The Ogallala fossil water aquifer in the Central Plains is being depleted by agricultural and urban extraction, with no effective recharge. An increasing number of water disputes is taking place as well in the eastern U.S. between Virginia and Maryland, Virginia and North Carolina, and among Georgia, Florida, and Alabama.

Large-scale sea or brackish water desalination is being implemented in Tampa, Florida, and is being planned for sites in California, Texas, Utah, and Hawaii. Competition for fresh water is already limiting energy production.

In response, the Electric Power Research Institute (EPRI), the research and development arm of the private electric utility sector, has initiated a major new research program that will address the connection between fresh water availability and economic sustainability. As a first step, EPRI undertook a screening study aimed at characterizing the probable magnitude of the quantity of water demanded and supplied, as well as the quality of such water, in the U.S. for the next half century (2000-2050).

This screening study, published in 2002, concluded that "the water budget of the United States in the next 50 years is more uncertain than the currently available predictions suggest," that "the cost of insufficient water availability over the next 50 years can be huge," and that "water availability can severely constrain electricity growth."

Concluding Thoughts: It is important to emphasize again that we can no longer take water resources for granted if the U.S. is to achieve energy security in the years ahead. This is true of other countries as well, and reflects the strong linkage between water and energy, as well as a growing water security crisis world-wide. Water and energy are also the critical elements of sustainable development, a major goal of U.S. foreign policy. Without access to both, economic growth and job creation cannot take place and poverty cannot be averted.

If our nation is to achieve water and energy security, the linkage between the two must be recognized and acted upon. This will require an enhanced partnership between the federal government, which has primary responsibility for energy security, and the states, where water issues have historically been addressed. The federal government and the states both have much to contribute to such a partnership, which is urgently needed.

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