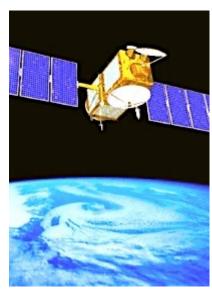




U.S. Wasted NASA and Opportunity for Energy Independence

I was there. I ought to know. I served as editor-in-chief of NASA's newspaper at the Johnson Space Center (JSC) in Houston, Texas, for two critical years — my "reward," as it were, for having researched and penned what turned out to be a definitive paper entitled "Alternatives to an Energy Crisis" at the height of our nation's first energy crisis during the Carter Administration in 1976. Long gas lines, shortages and a newly invoked "oil weapon" generated by the twelve (mainly hostile) nations that constitute the Organization of the Petroleum Exporting Countries (OPEC), were the opening salvos in a war against the free world, announcing to the United States, in particular, that henceforth it would be entities in the Middle East and South America that determined whether everybody's toast popped up in the morning and whether the oven came on at dinnertime.



America's left-wing, true to form, blamed us, under the now-familiar banner of rabid consumerism, and urged college students to head for Hippie-Kibbutzville and "save the planet." Left-wing foundations and institutions most people never heard of saw an opportunity to bring new meaning to Benjamin Franklin's admonitions on thrift: conservation soon became mandatory recycling; waste was okay as long as it didn't apply to driving short distances or leaving the lights on; and off-shore (as well as on-shore) drilling for oil in the continental United States was looked upon with contempt. Well, maybe not the *ultimate* contempt: nuclear energy, including fusion research, was viewed by scientific wizards like Jane Fonda with outright alarm. Panicked neighborhoods started erecting "Nuclear Free Zone" signs — one of the initial grassroots forays into political correctness.

Meanwhile, less than a decade after landing the first man on the Moon, here was this cool curiosity called the National Aeronautics and Space Administration (NASA) — something most people took for a tourist attraction with lots of neat gadgets — plodding away constructing computers, solar cell technologies, satellite systems and research facilities (like Skylab). Then came its grandest creation, a "space workhorse" called the Space Shuttle.

The Shuttle could, would, even should enable this nation, and possibly the world, to free itself of messy fossil fuels and collect energy directly from the Sun, via a massive array of solar collectors in geosynchronous (stable) orbit (not just on rooftops) — above the hindering clouds and storms of the planet — and then beam this inexhaustible source by microwave to vast swathes in otherwise unusable



Written by **Beverly K. Eakman** on March 31, 2010



and uninhabitable locales here on Earth, such as the Mojave Desert, for transmission to underground power grids nationwide.

It was an audacious and bold undertaking that would require enormous capital investment — beyond the scale of interstate railroad systems and highways. Solar cell technology at that time was in its infancy, netting only 10- or 15-percent efficiency, the rest lost to atmospheric elements. But Silicon Valley was rising, and any scientist worth his or her microscope could envision the day when solar collectors (not mere "cells") would yield somewhere near a 70-percent efficiency, as is the case today.

NASA's research had already produced a whole wave of new technologies people hardly thought about — ball bearings for drill bits in dentists' tools; wireless, hand-held calculators; remote sensing platforms for measuring pollutants and identifying mineral, water and geological fuel sources; air-bubble wrapping for shipping; instantaneous transmission of voice and picture; and much more, though the increasingly left-leaning news services rarely mentioned them back in January 1976, when my 200-page in-house document, "Space Program Benefits and Applications," was published.

Moreover, to say that the "sky was the limit" was no mere, casual expression. To say that we owe marvels like cell phones (with all their various "aps"), high-definition televisions, laser-medical devices, nuclear medicine, nuclear power plants, and the Internet in large part to NASA-inspired efforts is an understatement.

Yet, unbelievably, we blew it!

Until now I have remained silent, except to a few movers and shakers in the NASA establishment (who basically agree with me, but say that politics has essentially trumped practicality), but a just-published piece in Sunday's *Washington Post*, "NASA's \$9.4 billion mission to nowhere," (NASA's \$9.4 billion mission to nowhere) was the last straw. Had we pursued what was already on the drawing board in 1978, we would be essentially finished today. The few items in popular use that might still require fossil fuels would not necessitate overseas imports for hundreds of years, and given the rate of technological advance, even those few would probably have yielded alternative methods by now.

Having been a contractor with NASA's documentation and Public Affairs Offices at JSC (the home of Mission Control) from 1974-1979 and collaborated with both scientists and other NASA Centers around the country, I have to say that the space agency, in its heyday, did a superlative job at quality assurance (99.9 percent goal), but a lousy job of public relations. It was almost as if the scientists and engineers felt they were "above" such petty objectives, and so NASA threw most of what monies it allocated to public relations into answering mail, mind-blowing space photos (that few people at the time even knew they could purchase), and tours of various facilities that included nifty hands-on simulators and museum-quality displays.

But most of the public didn't tour NASA facilities or write letters on specific topics, so they had no idea what went on — unless, perhaps, they subscribed to post-graduate-level scientific magazines which occasionally carried a feature article.

Despite several commendations for my work (I did everything from writing scientists' professional papers, to transcribing space vehicle-to-ground tapes, to preparing astronauts' manuals, to covering major technical conferences — and loved every minute of it), I did not even attempt to pursue a permanent, federal position once I realized that the agency was assigning people they didn't know what else to do with in positions of leadership at the public relations department. I sensed that shoddy PR was a recipe for disaster and that the agency would become politicized along with countless others



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down the road.

Today my hunch has proved correct. In January 2010, news came to light that NASA, too, had allegedly hid climate data — from as far back as the 1930s — to support already suspicious "global warming" dogma (now auspiciously referred to as "climate change"). This report came on the heels of e-mails revealing the same from the University of East Anglia's Climate Research Unit in Great Britain and other reports.

I was not surprised. Not long before, Nobel Prize winner for physics, Dr. John C. Mather, once a boy prodigy now renowned for his multiple PhDs, gave a presentation at the 2006 NASA gala in which he offered passing acknowledgement to the man-caused global-warming theory. I deduced that he must have cared more about funding and grants than he did about the science, as he surely was aware of contentious points in that debate and chose not to mention any alternative theories, or even point to statistics which differ on whether the Earth is actually warming or cooling. Of course, most politicians are well aware that "climate change" is neither about climate nor change, but about redistribution of wealth — another issue entirely. The fact is, most hard-core scientists are uninterested in politics, and perhaps that is part of the problem.

It turns out the idea of geosynchronous orbiting solar arrays for transmission of energy was circulating before I even wrote about it. And guess what... It was environmental extremists that quashed it just as my paper was about to be put before the Office of Technology Assessment in Washington, D.C. Environmentalists had a hissy fit — over a few migratory birds which they imagined might fly into the line of microwave transmissions in the Mojave Desert. U.S.-based oil companies complained, too — that their businesses would tank and exploration would cease. These complaints did have some basis it turned out, but not for the reasons they thought at the time. What hadn't occurred to these short-sighted whiners was that (a) the environmentalists were going to be targeting oil exploration and nuclear-power research next, and that (b) OPEC nations in the Middle East would continue to "up" the ante whenever it felt like it.

The Space Shuttle, meanwhile, was being constructed with the intention of building things in space — a prelude to living and, more importantly, working in space. Any weaponry associated with the project would have been directed toward defending its construction and continued existence.

Today, as the *Washington Post's* Joel Achenbach essentially acknowledged in his March 28 piece, our space program is in serious decline, and that is no accident in an America where funding for research and development is being redirected toward a welfare state.

Why did we allow the billions already expended to go to waste, while the tab for construction costs edge ever higher? While quarks and black holes may be of interest to rocket scientists and brainy engineers, they no longer galvanize the public in an era of special effects and HD-TV. NASA's scientific achievements are now poised to pay practical dividends. Nothing to explode, no oil slicks, no solar panels on rooftops, no brownouts or blackouts — and less dependence on foreign energy sources in hostile countries.

So, here we sit: energy costs rising. And you can bet your SUV that Al Gore and Nancy Pelosi will start foaming at the mouth when it's their light switches that require a full-time back-up generator. If both Democrats and Republicans are determined to run up a deficit; if conservatives expect to retain a strong defense in an environment of leftist-inspired "pacifism"; if conservative strategists seek to extend a message beyond their usual bases of support, then let's get something worthwhile out of all this



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spending for our children and grandchildren before another country eats our lunch.

Don't believe the latter? Well, get on the Internet and take a look at who's talking space-based energy idea now: the Japanese Space Agency, the Canadian Space Agency, etc. (See: http://www.mounteverest.net/news.php?id=18514, Sept. 18, 2009, complete with scientific links and details).

Of course, some will say that the Constitution did not provide for our federal government to spend billions of dollars on space exploration and there was little justification to create NASA in the first place. And theirs is a point well taken. However, an argument could also be made that domination of space is essential to our national defense, which is a legitimate constitutional role for our federal government.

Sometimes, too, these massive government programs, of questionable constitutionality as they may be, fall into the "water under the bridge" category. Social Security is a case in point.

Until such programs can be privatized, however, it seems only sensible to use the tax dollars already extracted from the public as efficiently, and as wisely, as possible.

If the money already spent for NASA can provide us with better, cheaper energy, why not recoup a better return on our investment?

This is not the time to accept "a failure to launch."

Addendum: It is true, as one respondent notes below, that I am not an engineer or scientist, but it is not true, as he claims, that I was a speech writer for NASA (though I was a speech writer for three other governmental agencies). In point of fact, I worked on scientific papers as part of NASA's primary documentation contract and I was editor-in-chief of NASA's newspaper (Johnson Space Center), which included penning new articles. I still have my now-yellowed, 400-plus page document ("Alternatives to an Energy Crisis," 1976), and my purpose in writing the above article was to share an alternative a NASA internal document said was practical for addressing America's energy woes. The fact that NASA recommended an alternative does not mean that NASA has to (or even should) implement it; but the fact that a bought-and-paid-for opportunity was lost does show the problem with large bureaucracies and government agencies. — Beverly Eakman

Beverly K. Eakman is a former educator and retired federal employee who served as speechwriter for the heads of three government agencies as well as editor-in-chief of NASA's newspaper (Johnson Space Center). Today, she is a Washington, D.C.-based freelance writer and columnist, the author of five books, and a frequent keynote speaker on the lecture circuit. Her most recent book is *Walking Targets: How Our Psychologized Classrooms Are Producing a Nation of Sitting Ducks* (Midnight Whistler Publishers).





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