

Impacts of Establishing a Breakthrough New Energy Economy

Brian O’Leary and Wade Frazier, www.brianoleary.info and www.ahealedplanet.net, June 1, 2009, in reply to the U.S. DoE/DARPA-E New Energy Grant solicitation, control number 25A5231.

“The world is at a crossroads. We can no longer afford to ignore the human impact of climate change. This is a call to the negotiators to come to the most ambitious agreement ever negotiated or to continue to accept mass starvation, mass sickness and mass migration on an ever growing scale.”

— Kofi Annan, former Secretary General of the United Nations, Global Humanitarian Forum, May 29, 2009

“From now on, America’s top priority in the energy field must be to explore all potential components of this new energy future and move swiftly to develop those with the greatest promise.”

— Prof. Michael T. Klare, *Foreign Policy in Focus*, June 28, 2008

“The resistance to a new idea increases as the square of its importance.”

— Bertrand Russell

Abstract

There is evidence that breakthrough clean energy proofs-of-concepts could lead to a new energy economy that would provide a sustainable future for all of humanity and nature. Because this possibility has been ignored by mainstream science, due to limiting scientific assumptions, and suppressed by an energy industry vested in unsustainable practices, it has been difficult for the public to recognize the enormous potential of new energy sources or to understand how they could be researched, developed, and implemented in practical ways. We propose assembling an advisory group to the DoE to make recommendations about R&D programs and to suggest a realistic transition to a new energy economy. We also propose polling the public about their attitudes toward a future of breakthrough clean energy. This overall effort, including the activities of the advisory group, would be largely voluntary—in harmony with the nature of “free” energy.

Introduction

Over the past century, the world has witnessed hundreds of demonstrations of a variety of breakthrough clean energy concepts, whether it be energy from the vacuum (“zero-point”), cold fusion, or special hydrogen and water chemistries in the presence of catalysts. Any one of these concepts, if properly developed, promises a world of clean energy abundance. Yet mainstream scientists, corporations, governments and media have ignored and suppressed these proofs-of-concepts before they’ve been put to practical use. Most decision-makers and public spokespeople deny the very *possibility* that a breakthrough clean, cheap and decentralized energy culture could ever evolve, because this would appear to violate existing scientific principles. But we have witnessed many demonstrations of the viability of these possibilities. We believe that many of these concepts are viable if the required R&D and deployment were carried out under public sponsorship. If responsibly managed, the adoption of these concepts could lead civilization to a culture of abundance.

If we continue on the path of conventional energy sources, we face a dismal future with carbon and air pollution, Peak Oil and the dangers of nuclear power. Our analysis shows that no energy alternative from traditional categories (e.g., solar, wind and biofuels) could replace fossil fuels and nuclear power without enormous capital, materials, land and environmental consequences. We believe that only the new energy technologies can provide us with a sustainable future. Even though there is widespread skepticism about new energy at the present time, we believe that, sooner or later, these transformative technologies are likely to be developed, even though they will be disruptive to the existing energy industry.

A number of questions come to mind: should the DoE establish an R&D laboratory for all clean renewable energy concepts, leaving no stone unturned in its search? If a breakthrough in clean, cheap, decentralized energy were to find practical application, should these technologies be publicly or privately owned? How should their development and use be regulated? How can we ensure that the transition to a new energy culture will be as smooth as possible? How can the public be best served? We examine these questions in this concept paper and in the proposed work.

The Big Picture

It is difficult to overstate the enormous effect that abundantly available, pollution-free energy would have on humanity and the planet. The monetary economy does not reflect real costs of production, but largely only puts a price on human labor. In reality, energy powers the economy and always has, no matter what price the market may attach to various energy sources. Each of the epochal changes in the human journey, from the time that humanity's ancestors left the tree and lost their opposable toes, has been due to exploiting new energy sources. Advances in stone tools and group hunting tactics allowed humans to become super-predators approximately 40,000 years ago, and allowed humanity's range to eventually encompass all continents except Antarctica. Approximately 10,000 years ago, probably inspired by the gradual decrease in easily hunted meat, the Domestication Revolution involved the first locally stable energy sources –domesticated plants and animals– and civilization thereby developed. The next epochal revolution, the Industrial Revolution, exploited the energy of hydrocarbons extracted from below the earth's surface. It is estimated that in today's advanced industrial societies, more than 10 times the gross energy per capita is consumed than in the advanced agricultural societies, and at more than twice the efficiency of conversion into useful work, so that citizens in today's advanced industrial economies benefit from nearly 30 times the energy output than their agricultural ancestors.

The dynamics arising from the energy paradigms for those societies have had profound, and not always obvious, features. Before the Domestication Revolution, the only possessions that people could enjoy were what they could carry in their arms or on their backs. With the local and stable energy sources that domesticating plants and animals provided, people began constructing robust shelters, professions began, and economic, political and social hierarchies developed. These hierarchies are an inevitable result when energy scarcity defines a society, including modern societies. Early civilization saw humanity's first potentates and slaves, and the elites of virtually all civilizations have engaged in conspicuous consumption as a mark of their status. Slavery and other forced labor institutions flourished until the Industrial Revolution. With the rise of machines and the energy to run them, forced labor was no longer economically necessary or feasible, especially considering the innate desire in all humans for freedom. It is also no coincidence that women became liberated during the industrialized era. In very real terms, energy equals choice, which is another way of saying that energy equals freedom. In today's world, societies that have the highest per-capita energy consumption generally have the greatest freedoms. If a society loses its energy sources, it will lose its freedoms. Conversely,

if an abundant energy source becomes available for Americans and all humanity, an unprecedented epoch of the human journey will be possible.

Americans consume about 80 times the energy that goes into their diets. Only about a billion people on earth today live in industrialized civilizations that consume large amounts of energy. There is not enough *hydrocarbon* energy available on the planet to provide all of humanity an industrialized lifestyle, and it is clear that the hydrocarbon age is nearing its conclusion. Whether Peak Oil becomes a reality for humanity this year or in a hundred years is a relatively fine distinction in the broad perspective of the human journey. War, air pollution, and the steeply hierarchical economic, political and social systems of humanity are all, at their root, based on energy scarcity. If all humans had ready access to a thousand times their dietary calories, or ten thousand, and the production of this energy had no environmental impact, earth and humanity would be transformed in ways we can only imagine:

1. Almost all air pollution would immediately cease.
2. There would be no mining waste, because all elements are useful; it is primarily due to energy scarcity that mining produces waste.
3. All materials could be indefinitely recycled and made good as new, in cradle-to-cradle fashion (so mining would come to an end soon, anyway); all water pollution would also cease, and all of humanity would drink purified water.
4. Because wars are primarily based on disputes over control of resources, the motivation behind wars would largely disappear when abundant energy ensured abundant resources for everyone.
5. Food could be raised in indoor environments that would not impact natural environments, and the biosphere could begin to heal.
6. A great deal of effort in industrialized societies is involved in the exchange aspect of economics, which would be simplified in a free energy culture.
7. The steep economic, political and social stratification of society would be reduced.
8. The vacuum of space (sometimes called the ether) is full of potential energy that can be practically used not only to tap energy but to create novelty in the material world.

This list may seem utopian to some, but we are convinced that it is all quite feasible if humanity were to enjoy abundant, decentralized, non-polluting energy. Whether or not these potential changes are realistic, however, it is clear that there will be great benefits to society with free energy. The potential benefits are so great, and the dangers of relying on traditional energies sources are so overwhelming, that it is incumbent on us to proceed in the event the research does prove out a new energy science and the mainstream skeptics are wrong (as history has so often shown).

Proposal

We propose that (1) we study the public's attitudes toward a new energy future for humankind, and (2) we establish a voluntary advisory group of independent and knowledgeable citizens to make recommendations about a DoE R&D program and devise scenarios for the transitions to and implementation of new energy. Included would be polls of attitudes toward the basic hypothetical question: if one or more breakthrough energy technologies were to prove to be viable, what safeguards do we need to implement to prevent the abuse of these technologies?

The two of us have thought through these questions for a long time in collaboration with numerous colleagues. We would convene an advisory group that would periodically report to the DoE with its recommendations.

Personnel

We each have had decades of experience in the new energy field in many capacities: faculty research and teaching at leading universities, advisory positions to the U.S. Government, business development, writing and experience in bringing alternative energy technologies to the marketplace. We have witnessed several demonstrations of proofs-of-concepts of breakthrough new energy sources in laboratories throughout the world. We have both written extensively about the cultural impact of various scenarios for creating a new energy future for humanity. The proposed study will be a continuation of those efforts.

Our request for only \$1, in addition to travel expenses, reflects the principle that, in an abundance paradigm, humanity will begin to realize that some things should be our birthright: clean water, food, shelter, clothing, *and* energy. We cannot continue to pollute the biosphere with dirty energy as we have in the past. Several environmental tipping points are coming closer and may have already been exceeded. Central to our very survival must be a revolution in our approach to energy.

Further Obstacles and Opportunities

Not only is the scientific credibility of new energy questioned by many traditional scientists. Also, the prospect of taking such a quantum leap is likely to disrupt the way we do business in the world. We believe that these energy technologies have been suppressed in part because of the perception that existing economic and power structures would be devastated by a new energy economy. In fact, there are many credible, extant testimonies by insiders and others that such disruptive technologies *have already been* extensively developed by covert interests, both governmental and private, and have been kept from public awareness because of their threat to the world's power structure.

Considering the urgency of the global environmental crisis and the fact that black projects may be already addressing the questions of free energy and anti-gravity propulsion, we the people need to participate in the process of deciding our collective future instead of remaining in ignorance. Regardless of governmental policies, we believe it is likely that someone, somewhere will develop breakthrough clean energy technologies for public use. It would seem prudent for the public and the U.S. DoE to become educated about the true options that lie ahead. Do we have the courage to embrace a new energy future? Can we make the necessary political, economic and social adjustments to create a sustainable future for humankind?

Conclusion

In the final analysis, we are going to have to learn how to live in balance with nature. We are poised on the brink of our next evolutionary step. Key to understanding all this is our choice about what kind of energy culture could benefit us most. For our own survival, now is the time to have that discussion. If we do not take this step, and learn to live in harmony with nature, we face extinction. Therefore, it is incumbent on us to examine *all* candidate energy sources that could fulfill the mandate for a sustainable civilization.