

## Sustainable Energy Will Bring Peace on Earth

(by Alice Slater)

We are at a critical moment in history. Accelerating weather catastrophes—tsunamis, hurricanes, drought, the melting of the polar ice caps—underline the urgency to heed the scientific consensus that we are endangering our very survival on the planet with the continued use of carbon based fuels. Dependency on fossil fuels creates political and economic instability across the globe. Depleting resources and price volatility place growing strains on energy security concerns. The major powers are employing military power to gain access to diminishing energy resources which could lead to hostile escalation and armed conflict. Major energy-importing states are increasing arms transfers to their energy suppliers. For example, the United States and China, have increased arms deliveries to oil-producing states like Angola, Nigeria and Sudan in Africa and in the Caspian Sea basin, to Azerbaijan, Kazakhstan and Kyrgyzstan. Russia is also using arms transfers to influence oil and gas producing regions of the Caspian Sea basin and the Persian Gulf. <sup>i</sup>

Last spring, we heard disturbing reports of food riots in more than 25 poor countries around the planet, <sup>ii</sup>caused by food shortages, due to drastic changing weather conditions and tragic efforts to grow food crops for fuel, pitting car owners of the world against the two billion poor on our planet who struggle to get enough to eat, without even offering any benefits to the environment, since growing corn and making ethanol uses lots of fuel, fertilizer, pesticides and water, and degrades the soil. <sup>iii</sup> The push for biofuels is driven by massive industrial agricultural corporations, seeking ever larger profits, as they misrepresent the actual costs, in league with the fossil and nuclear fuel industries, with their huge public relations operations, grinding out false facts to undermine the possibilities for harnessing abundant free energy from the sun, wind, tides, and geothermal from deep within mother earth, because corporations are unable to control its production and make profits from its sale. Who can sell the sun, wind, tides? We should be reallocating the \$250 billion dollars in annual subsidies to fossil and nuclear fuels to clean energy resources. <sup>iv</sup>

Here is what US President Franklin Delano Roosevelt had to say about similar forces in 1936:

*We had to struggle with the old enemies of peace—business and financial monopoly, speculation, reckless banking, class antagonism, sectionalism, war profiteering. They had begun to consider the Government of the United States as a mere appendage to their own affairs. We know now that Government by organized money is just as dangerous as Government by organized mob. <sup>v</sup>*

Every 30 minutes, enough of the sun's energy reaches the earth's surface to meet global energy demand for an entire year. Wind can satisfy the world's electricity needs 40 times over, and meet all global energy demands five times over. The geothermal energy stored in the top six miles of the earth's crust contains 50,000 times the energy of the world's known oil and gas resources. Tidal, wave and small hydropower, can also provide vast stores of energy everywhere on earth, abundant and free for every person on our planet, rich and poor alike. We can store hydrogen fuel in cells, made from safe, clean energy sources, to be used when the sun doesn't shine and the wind doesn't blow. When hydrogen fuel is burned, it produces water vapor, pure enough to drink, with no contamination added to the planet. Iceland plans to be completely sustainable by 2050, using hydrogen in its vehicles, trains, busses and ships, made from geothermal and marine energy. <sup>vi</sup>

The failure of the world to achieve nuclear disarmament and prevent nuclear proliferation should serve as a wake up call that we cannot continue "business as usual" while increasing numbers of nations assert their right under the Non-Proliferation Treaty to pursue so-called "peaceful" nuclear technology. "Peaceful" nuclear programs in Israel, India, Pakistan and North Korea enabled those countries to covertly develop nuclear weapons. Vast schemes for reprocessing nuclear fuel like the Global Nuclear Energy Partnership, with the US and other industrial countries, will result in a failed attempt to exercise control and domination

over the nuclear fuel cycle, while further contaminating our planet, creating yet another discriminatory class of “haves” and “have nots”, and fueling future strife.

We have seen one war start over Iraq’s supposed possession of nuclear weapons, and war fever is heating up to attack Iran now for its pursuit of so-called “peaceful” nuclear technology. We are now wasting the world’s treasure at the rate of over one trillion dollars per year to feed the murderous war machine. Although devastating, cruel wars, motivated by fear, greed and the desire for power, have been common throughout human history, there has been nothing like the enormous speed up of destructive war, fueled by science and technology, as we saw in this last century, starting with 20 million deaths after World War I<sup>vii</sup> and ending with well over 100 million deaths by the end of the 20<sup>th</sup> Century,<sup>viii</sup> with the horrors of Hiroshima, Nagasaki, Dresden, the Holocaust, or the slaughter of a quarter of the population of Cambodia by the Khmer Rouge, as only a few awful examples of what the instruments of war have wrought.

Yet it was only in 1969, less than 40 years ago, that humanity landed on the moon and, for the first time saw the image of our fragile, beautiful blue planet, floating in space, giving us a new perspective of a unified world, sharing this small spaceship earth, with a profound influence on our consciousness that is bound to help us shift from the paradigm of war and technological domination and control to a more balanced nurturing interdependent vision for the health of earth’s inhabitants. This transformed earth consciousness can help us perfect our vision for peace by expanding it not only an end to the violence of wars in the traditional meaning but in an expanded definition of destruction against all living things and the very ecology of our planetary home itself.

To live on a peaceful earth, we will have to phase out not only war, but nuclear power as well. Nuclear reactors generate toxic radioactive waste that threatens both human life and the environment. This waste will remain lethal to human health and the environment for more than 250,000 years, and its continued production poses an unacceptable burden on present and future generations. Plutonium is being shipped across vast stretches of the ocean for reprocessing in England and France, exposing the world to unacceptable risks from accidents or terrorism.

In every situation where nuclear technology is employed—whether military or civilian, countless studies report higher incidences of birth defects, cancer, and genetic mutations.” A US National Research Council 2005 study reported that exposure to X-rays and gamma rays, even at low-dose levels, can cause cancer. The committee defined “low-dose” as a range from near zero up to about... 10 times that from a CT scan. “There appears to be no threshold below which exposure can be viewed as harmless,” said one NRC panelist.<sup>ix</sup> Tens of thousands of tons of nuclear waste accumulate at civilian reactors with no solution for its storage, releasing toxic doses of radioactive waste into our air, water and soil and contaminating our planet and its inhabitants for eons. A study, last year by the German government found that children living near nuclear power stations are more likely to suffer leukemia than those living farther away.<sup>x</sup>

Despite the obvious health and security disadvantages of nuclear power, it is being promoted by industry for its potential to help avert climate catastrophes. But nuclear power is not pollution or emissions free. Every step of the nuclear fuel cycle – mining, development, production, transportation and disposal of waste – relies on fossil fuels and produces greenhouse gas emissions. A complete life-cycle analysis shows that generating electricity from nuclear power emits 20-40% of the carbon dioxide per kilowatt hour of a gas-fired system when the whole system is taken into account.<sup>xi</sup>

Equally important, nuclear power is the slowest and costliest way to reduce CO<sub>2</sub> emissions, as financing nuclear power diverts scarce resources from investments in renewable energy and energy efficiency. The enormous costs of nuclear power per unit of carbon emissions reduced would actually worsen our ability to abate climate change as we would be buying less carbon-free energy per dollar spent on nuclear power compared to the emissions we would save by investing those dollars in solar, wind or energy efficiency. In addition, nuclear power is limited only to the production of electricity.

Despite the tens of billions of dollars that the nuclear industry has received since its inception in 1948, it is still unable to operate without massive subsidies, tax breaks and incentives<sup>xii</sup> The U.S. nuclear industry is estimated to have received more than \$115 billion in direct subsidies from 1947 through 1999. Government subsidies for wind and solar energy for the same period totaled only \$5.49 billion.<sup>xiii</sup> Nuclear storage facilities and power plants themselves are vulnerable to accidents or attacks, and there are similar hazards in transporting nuclear waste by truck, train or ship. Reports estimate that the Chernobyl disaster may ultimately cause 270,000 cases of cancer, of which 93,000 could be fatal.<sup>xiv</sup> A terrorist or military attack resulting in a core meltdown would carry a disastrous human toll, with estimates of upwards of 15,000 acute radiation deaths and up to one million deaths from cancer.<sup>xv</sup> And in a much less hypothetical example, the Indian Point nuclear reactors, located some 30 miles from New York City were listed as suggested targets in documents found from Al-Qaeda after the World Trade Center attacks.

When compounded with its limited ability to reduce greenhouse gasses compared to the reductions that could be achieved by using the same dollars for sustainable energy, the enormous proliferation and waste-related issues make nuclear energy an untenable and irrational energy choice. Renewable energy and energy efficiency are the only paths to true energy security assuring stable and reliable energy supplies and expanding energy access across the planet. The technology to harness the enormous potential of the sun, wind, tides and geothermal energy exists today. We can build a self-sustaining, earth-friendly energy infrastructure to harvest the earth's benign and abundant free resources.<sup>xvi</sup>

Last year the governments of Germany, Spain and Denmark launched the International Renewal Energy Agency, IRENA, which would empower developing countries with the ability to access the free energy of the sun, wind, marine, and geothermal sources, would train, educate, and disseminate information about implementing sustainable energy programs, organize and enable the transfer of science and know-how of renewable energy technologies, and generally be responsible for helping the world make the critical transition to a sustainable energy future. IRENE is the Greek word for peace, so this new initiative is especially well named. There are presently 137 member states which have joined IRENA.<sup>xvii</sup> Abolition 2000, a network of over 2000 organizations in 95 countries, working for the elimination of nuclear weapons, has recognized the "inextricable link" between nuclear weapons and nuclear power and proposed a global campaign for 100 % participation in IRENA before the opening of the 2010 Non-Proliferation Treaty Review Conference.<sup>xviii</sup> If your country has not yet joined IRENA, we encourage you to contact your government officials and urge them to participate.

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<sup>i</sup> Tomgram:Michael Klare, *Oil Rules*, <http://www.tomdispatch.com/post/174919>

<sup>ii</sup> *New York Times*, April 30, 2008, at A16

<sup>iii</sup> Inter Press Service, "Biofuels a Lose-Lose Strategy, Critics Say" by Stephen Leahy, January 26, 2008

<sup>iv</sup> See, <http://www.abolition2000.org/atf/cf/%7B23F7F2AE-CC10-4D6F-9BF8-09CF86F1AB46%7D/ISEA.PDF>

<sup>v</sup> <http://docs.fdrlibrary.marist.edu/od2ndst.html>

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- vi See generally, A Sustainable Energy Future is Possible Now, [www.abolition2000.org](http://www.abolition2000.org)
- vii [http://en.wikipedia.org/wiki/World\\_War\\_I\\_casualties](http://en.wikipedia.org/wiki/World_War_I_casualties)
- viii <http://www.hawaii.edu/powerkills/20TH.HTM>
- ix <http://news-service.stanford.edu/pr/2005/pr-abrams-102605.html>
- x <http://www.psr.org/resources/childhood-leukemia-and-cancers.html>
- xi Storm van Leeuwen, J.W. and Philip Smith. Nuclear Power: the Energy Balance. The CO-2 Emission of the Nuclear Life-Cycle. 2005. Available at: [www.stormsmith.n/Chap1\\_CO-2\\_emission\\_of\\_the\\_nuclear\\_fuel\\_cycle.PDF](http://www.stormsmith.n/Chap1_CO-2_emission_of_the_nuclear_fuel_cycle.PDF)
- xii Scully Capital Services. 2002. Business Case for New Nuclear Power Plants. Available at: <http://www.nuclear.gov/home/bc/businesscase.html>
- xiii Renewable Energy Policy Project. Goldberg, Marshall. Federal Energy Subsidies: Not All Technologies Are Created Equal. Research Report No.11, July 2000. Available at: [http://www.crest.org/repp\\_pdf/subsidies.pdf](http://www.crest.org/repp_pdf/subsidies.pdf)
- xiv Greenpeace International. April 18, 2006. Available at: <http://www.greenpeace.org/international/news/chernobyl-deaths-180406>
- xv Frogatt, Anthony, Nuclear Issues Paper No.2: Nuclear Reactor Hazards. Heinrich Boll Foundation. December 2005
- xvi See, A Sustainable Energy Future is Possible Now, [www.abolition2000.org](http://www.abolition2000.org)
- xvii [http://www.irena.org/downloads/Foundconf/Signatory\\_States\\_20091006.pdf](http://www.irena.org/downloads/Foundconf/Signatory_States_20091006.pdf)
- xviii [www.abolition2000.org](http://www.abolition2000.org)