

**STATEMENT OF PRINCIPLES
TO ACHIEVE A
CARBON FREE AND NUCLEAR FREE U.S. ENERGY SYSTEM BY 2050**

We the undersigned believe that the United States can and should implement energy production, distribution, and use policies that will phase out the use of fossil fuels and nuclear power by the year 2050. A recent book, *Carbon-Free and Nuclear-Free: A Roadmap for U.S. Energy Policy*,¹ provides a detailed analysis that shows that this goal is technically and economically feasible. The *Roadmap* lays out how we can get from a 94 percent reliance on fossil fuels and nuclear energy (as of 2005) to none by mid-century.² Oil imports would be completely eliminated along the way.

Action to achieve such an energy system as soon as possible is necessary given the scale of the climate crisis, global conflicts over oil resources, and the serious risks of nuclear power. Achieving a near total elimination of CO₂ emissions in the United States is also implied by U.S. commitments under the United Nations Framework Convention on Climate Change (UNFCCC) combined with the latest report of the Intergovernmental Panel on Climate Change (IPCC). The IPCC estimates that global CO₂ emissions should be reduced by 50 to 85 percent by 2050 relative to 2000 levels to limit temperature increases to less than 2 to 2.4 degrees Celsius, with the former reduction being given only a small chance of accomplishing the goal. If global emissions are allocated on a per capita basis, the U.S. would have to reduce CO₂ emissions by 92 to 96 percent by 2050 to have reasonable confidence that the temperature goal will be met. The United States has signed and ratified the UNFCCC, which went into effect in 1994.

A U.S. goal of zero-CO₂ emissions would greatly enhance the likelihood of serious negotiations with China, India, and other developing countries towards an agreement to reduce global CO₂ emissions by 50 to 85 percent. It would be the most practical way to recognize that the United States has contributed disproportionately to the build up of CO₂ in the atmosphere. It would show developing countries by example that economic well-being can be achieved using ecologically sound approaches. And it would establish U.S. leadership in an area where it has been sorely lacking.

A reliable electricity sector that is more secure than the present one can be created without nuclear power. The promoters of nuclear energy have used the threat of global warming to rekindle interest, but nuclear power entails risks of nuclear proliferation, severe accidents, and terrorist attacks. It would exacerbate the problem of nuclear waste, for which no reasonable solution is in sight. Overall, it shifts the burden of radiation and proliferation risks arising from current energy use to future generations.

Greatly increased energy efficiency throughout the country will make possible a more economical and faster transition to a renewable energy economy. Solar, wind, biofuels, and other renewable energy sources are ample and capable of supplying the energy requirements of a zero-CO₂ U.S. economy. But converting food, such as corn, into biofuel is not a suitable approach, because it is associated with increases in food prices, poor net energy output, and large greenhouse gas emissions. Biofuels must be derived from plants that trap solar energy efficiently and that can be grown on marginal lands. In addition, certain aquatic plants, including some types of algae, could simultaneously provide fuels as well as other environmental benefits.

¹ *Carbon-Free and Nuclear-Free: A Roadmap for U.S. Energy Policy* by Arjun Makhijani, Ph.D., is published jointly by RDR Press and IEER Press, 2007. It can be downloaded free at <http://www.ieer.org/carbonfree/CarbonFreeNuclearFree.pdf>. The Roadmap is described in Chapter 8.

² Another recent book, *Winning Our Energy Independence: An Energy Insider Shows How*, by S. David Freeman (Layton, Utah: Gibbs Smith, 2007) also advocates a fully renewable, non-nuclear U.S. energy system.

Subsidies for problematic energy sources, notably fossil fuels, nuclear power, and food-based biofuels, should be ended. For example, neither loan guarantees nor production tax credits should be provided to new nuclear power plants.

New coal-fired power plants without carbon capture and storage (also called “sequestration”) should be banned. While there is some experience with CO₂ storage, it is not yet a proven technology for climate protection, which requires isolation of CO₂ from the atmosphere for hundreds, if not thousands, of years. Storage technology should preferably be developed and tested using emissions from existing rather than new sources of CO₂. Carbon capture and storage technology may be needed to remove CO₂ that has already been emitted to the atmosphere.

The U.S. government will need to invest tens of billions of dollars per year in the transition to a carbon-free, nuclear-free economy. The funds will directly support renewable energy and efficiency projects, assist state and local governments, and finance worker and community transition. The money can be raised in a variety of ways, including taxes and the sale of emissions allowances; it should be dedicated to help achieve the transition to a renewable energy economy.

Whatever set of policies is adopted, there should be no free emission allowances. Such giveaways are inequitable and regressive. There should be no international offsets or trade in CO₂ allowances, especially with countries that have not set stringent limits on CO₂ emissions. Further, importing biofuels from developing countries could create land pressures that could harm the poor and may even increase greenhouse gas emissions directly or indirectly, for instance, by increasing destruction of tropical forests and peat bogs. U.S. policies must ensure that the goal of reliably ending CO₂ emissions by mid-century is translated into laws, regulations, and intermediate targets that are verifiable and enforceable all along the way.

Scientists, including leaders of the IPCC, have been warning that there is little time left to begin to shift from increasing to decreasing greenhouse gas emissions, of which CO₂ emissions are the most important. The United States has delayed too long, partly using the argument that China and India and other major emitters also need to participate in achieving global reductions. We agree that they do; but we note that U.S. leadership, in both immediate action and long-term commitments, is a *sine qua non* for securing serious commitments from developing countries, which have until recently contributed little to the problem.

Finally, the establishment of a goal of achieving a carbon-free and nuclear-free U.S. energy sector by mid-century can have a transformative effect on the global *political* climate, which is a prerequisite for protecting the planetary *physical* climate. The ecological, health, and security benefits of realizing that goal will be immense. We are committed to establishing that goal, creating policies designed to achieve the goal, and dedicating the resources to implement those policies.

Signatories as of June 10, 2009:

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Alaska's Big Village Network	AL
Alliance for Nuclear Accountability	
Alliance for Nuclear Responsibility	CA
Associate of Sisters of Saint Francis/Clinton, Iowa	IN
Atlanta Women's Action for New Directions	GA
Australian Conservation Foundation	
Bellefonte Efficiency and Sustainability Team (BEST)	
Beyond Nuclear	DC
The Social Sustenance Organization	AR
Carnegie Endowment for International Peace	DC
Center for Water Advocacy	AK
Clean Water Action	DC
Community Health Initiative	CA
Concerned Citizens for Nuclear Safety	NM
Connecticut No Nukes/No War	CT
DC metro Science for the People	DC
Earthworks/Oil and Gas Accountability Project	
East Bay Peace Action	CA
Ecological Options Network	
Energy Minerals Law Center	CO
Environmental Working Group	DC

Faiths United for Sustainable Energy	FL
Grandmothers for Peace, San Luis Obispo County Chapter	CA
HEAL Utah	UT
HOPE: Honor Our Pueblo Existence	NM
Institute for Policy Studies	DC
Laguna Acoma Coalition for a Safe Environment	AZ
Mid-Missouri Peaceworks	MO
Nebraska Green Party	NE
New Energy Economy	NM
NorthWest Eco-Building Guild	WA
Nuclear Age Peace Foundation	CA
Nuclear Information Resource Service	MD
Nuclear Watch South	
NukeWatch	WI
Olympia Climate Action	WA
Public Citizen	DC
Public Citizen--TX	TX
Rainforest Action Network	CA
Safe and Green Campaign, VT	VT
Sierra Club-CA	CA
Snake River Alliance	ID
Solar-WA	WA
Southern Alliance for Clean Energy	GA
Southern Energy Network	
Southwest Solar Design	NM
Students for Environmental Action	TN
Sustainable Energy and Economic Development Coalition	TX
Tallahassee Area Community, Inc.	CO
The Stella Group, Ltd.	
The Vermont Yankee Decommissioning Alliance	VT
Think Outside the Bomb Youth Network for Disarmament	CA