

# **A Post-Fukushima Program for Increased Nuclear Security and Safety in the US**

Nuclear power is dirty, dangerous, and extraordinarily expensive. Routine operation of nuclear reactors releases toxic radiation, generates lethal radioactive waste, requires polluting uranium mining, and poses proliferation risks. The disaster at the Fukushima nuclear complex in Japan serves as a new reminder that nuclear accidents happen more frequently than governments and the nuclear industry admit, and that such accidents can be triggered by a myriad of man-made and natural factors.

**We believe the U.S. must quickly develop a clear plan to phase-out existing nuclear reactors at the earliest possible date and replace their power with clean, sustainable energy sources.**

This phase-out implies a speedy end to nuclear fuel production, and to uranium mining, importation and processing.

The United States already has begun a transition to safe, clean, and affordable energy sources, including wind, solar and appropriately-sited geothermal power, increased energy efficiency, smart grids and distributed generation technologies, and research into new technologies such as microalgae fuel. This transition must be accelerated.

**We believe it is not only possible, but essential for the life of our country and planet, to attain a nuclear-free carbon-free energy future by mid-century.** We believe this future can be attained at approximately the same percentage of GDP than is currently spent on energy if energy priorities are properly re-ordered. However, this future cannot be attained if tens of billions of dollars are spent on failed nuclear technology.

The ongoing disaster at Fukushima reminds us that the unexpected and the “impossible” CAN happen at any time. Specific steps that must be taken now to meet these goals include:

## **Immediately and permanently close the 23 General Electric Mark 1 reactors**

23 U.S. reactors use the same General Electric Mark I design whose containments failed so dramatically at Fukushima. This design has been criticized by top AEC and NRC safety officials since 1971 as being particularly vulnerable under accident conditions. After the 1979 Three Mile Island accident, the NRC closed the other similar Babcock and Wilcox-designed reactors until a safety review and appropriate improvements could be implemented. In this case, there are fatal flaws in the GE Mark 1 design that are fundamental and cannot be fixed. These reactors contribute less than 4% of total US electricity production yet present a clear and proven danger to people across the United States. There are ample reserve supplies to cover the loss of power these reactors would represent.

## **Immediately close all reactors on or near seismic faults**

Reactors on seismic faults, primarily in California and along the New Madrid Fault in the Midwest to the Southeast (though there are a few others) should be closed immediately pending an independent review of their capabilities to withstand major possible earthquakes, including failure of auxiliary facilities such as emergency diesel generators. This review must not only include “likely” earthquakes,

but possible earthquakes. A clear lesson of Fukushima is that we must be prepared for abnormal but conceivable natural events. In the case of nuclear power, already fragile in its safety margins, reactors must be able to withstand such events. Nuclear reactors that cannot withstand conceivable—not just likely—natural disasters must close permanently.

**Immediately remove all subsidies, particularly loan guarantees from the current federal budget; to be followed by repeal of the Price Anderson Act. A full-cost accounting study should be done of the civilian nuclear power fuel chain and the federal subsidies provided.**

Loan “guarantees” (actually taxpayer loans from the Federal Financing Bank) and other taxpayer subsidies for new nuclear reactor construction must be ended immediately, and any existing funds available rescinded.

Proposals for new reactors in the U.S. should be financed solely by the utilities and other entities involved, not taxpayers or ratepayers. Construction-Work-in-Progress rules in effect in a small number of states should be rescinded as undemocratic and an inappropriate use of ratepayer money. Public opinion polls show nuclear subsidies are a more publicly popular program to cut than any other federal program. Other relevant subsidies that should be eliminated include taxpayer funding intended to speed the implementation of new nuclear power, uranium and plutonium fuel production, and for reprocessing of radioactive waste.

The Price-Anderson Act limits nuclear industry liability in the event of an accident that could cause tens to hundreds of billions of dollars in damage. Americans cannot purchase insurance to protect from radiation accidents. This is an unsupportable subsidy to the nuclear industry, creates a certainty among nuclear utilities that they will be protected regardless of their actions and design flaws of their reactors and shifts the burden of accident consequences to taxpayers.

**Irradiated nuclear fuel pools should contain no more than the most recent five years of waste generated. Older waste should be put into hardened on-site storage that meets the “Principles of Safeguarding Nuclear Waste at Reactor Sites” endorsed by groups in 50 states. Reprocessing of radioactive waste—which creates plutonium-based MOX fuel exacerbating the situation at Fukushima—must be permanently banned.**

Since the potential radiological releases from a densely packed fuel pool may exceed those from a nuclear reactor, it is time to enact the steps outlined in the **“Principles of Safeguarding Nuclear Waste at Reactor Sites.”** This document resulted from years of discussion, and is an agreed-upon position on high-level radioactive waste storage. Hardened on-site storage recognizes that a permanent waste facility is decades away, that radioactive waste will remain at reactor sites for the foreseeable future, and concrete steps must be taken to secure existing radioactive waste in dry storage that is spread out and protected with barriers.

**No license extension of existing nuclear facilities**

New license extensions of US reactors should stop. License renewals already granted should be rescinded. No reactor should operate more than 40 years.

**No new licenses/permits/approvals should be granted for new uranium mines, fuel cycle facilities, reactors, reactor design certifications. There should be an immediate halt to licensing and**

**construction of any new nuclear project, including the MOX Fuel Fabrication Facility, “Generation IV” reactors, “small, modular reactors” and Thorium reactors.**

We have better ways to boil water...and boiling water is a very inefficient way to make electric power if it results in the generation of waste that has global consequences, such as that from uranium and from coal.

**Expand emergency evacuation zones to 50 miles for existing reactor sites**

The Nuclear Regulatory Commission recommended a 50-mile evacuation zone for U.S. citizens in Japan following the Fukushima disaster. In the United States, utilities should be prepared to evacuate at this distance. Currently, emergency planning zones are only 10 miles around reactor sites.

**Safety review of station blackouts**

Station blackout has long been an accident scenario of critical concern to nuclear experts. A new review of the ability of U.S. reactors to withstand a station blackout scenario of significant duration must be conducted and lessons learned implemented.

**Update US radiation standards to reflect Post-Chernobyl understanding of radiological impacts in addition to current standards based solely on A-bomb survivors**

Retire the radiation exposure risk model now used by the International Commission of Radiological Protection--which is the basis of and dominates all present radiation risk legislation--because it inadequately deals with exposures to internal radioisotopes and exposures to the most vulnerable: women, children, the fetus, and the elderly. Adopt the risk model proposed by the European Committee on Radiation Risk which more responsibly accounts for the risks and uncertainties of radiation exposure.

**End all import of foreign radioactive waste, stop all incineration of radioactive waste, ensure that all radioactive materials remain regulated.**

The United States has been asked to import, treat and dispose of foreign-origin radioactive waste. This must end. Incineration of radioactive waste spreads radiation into our air. This too must end. Materials contaminated with radiation must be treated as radioactive and must not be released into normal waste streams for disposal or recycling into commerce.

**Endorsed by:**

ACTelluride, Telluride, CO  
Alliance for Affordable Energy, New Orleans, LA  
Baltimore Nonviolence Center, Baltimore, MD  
Blue Sky Institute, UT  
Bluewater Valley Downstream Alliance, Grants, NM  
Body Wisdom Incorporated, Lake Bluff, IL  
Bryn Mawr Peace Coalition, Bryn Mawr, PA  
C-10 Foundation, Newburyport, MA

CEO Pipe Organs/Golden Ponds Farm, Delafield, WI

Cheaper, Safer Power, Portland, ME

Citizen's Resistance at Fermi Two, Monroe, MI

Citizens Action for Safe Energy, Tulsa OK

Citizens Campaign Against Nuclear Exposure, Niagara Falls - Lewiston, NY

Citizens for Alternatives to Chemical Contamination, Lake Station, MI

Clean Water Alliance, Black Hills of the Lakota People, Rapid City, SD

Climate SOS, Washington DC

Coalition for a Nuclear Free Great Lakes, Monroe, MI

Coalition for Peace and Justice, Linwood, NJ

Colorado Citizens Against ToxicWaste, Inc., Canon City, CO

Concerned Citizens for SNEC Safety, Six Mile Run, PA

Connecticut Coalition Against Millstone, Redding Ridge CT

Council on Intelligent Energy & Conservation Policy, Scarsdale, NY

Crabshell Alliance of Greater Baltimore, Baltimore, MD

Cumberland Countians for Peace & Justice, Pleasant Hill, TN

Defenders of the Black Hills, Rapid City, SD

Don't Waste Michigan, Holland, MI

Earth Day Coalition, Cleveland, OH

Ecology Party of Florida, Ft. Lauderdale, FL

Energía Mía, San Antonio, TX

Environmentalists Against War, San Francisco, CA

Footprints for Peace, Cincinnati, OH

Friends of Brook Park, South Bronx, NY

GE Stockholders Alliance, Tucson, AZ

Global Network Against Weapons & Nuclear Power in Space, Brunswick, ME

Grandmothers for Peace/San Luis Obispo County Chapter, San Miguel, CA

Grandmothers, Mothers and More for Energy Safety (GRAMMES), Normandy Beach, NJ

Green Party of San Diego County, CA

Green United States, Los Angeles, CA

GVConsulting, Washington, DC

Honor Our Pueblo Existence (H.O.P.E.), Santa Clara Pueblo, NM

International Socialist Organization

Laguna-Acoma Coalition for a Safe Environment, NM

Missourians for Safe Energy, Columbia, MO

NC Citizens Research Group, Durham NC

Network for Environmental & Economic Responsibility, United Church of Christ, Pleasant Hill, TN

Nevada Nuclear Waste Task Force, Las Vegas, NV

New Jersey Environmental Federation

New York Climate Action Group, New York, NY

Northeast Pa. Audubon Society, Honesdale, PA

Northwest Environmental Advocates, Portland, OR

Nuclear Guardianship Project, Berkeley CA

Nuclear Information and Resource Service, Takoma Park, MD

Nuclear Watch South, Atlanta, GA

Partnership for Earth Spirituality, Albuquerque, NM

Peace of the Action, Vacaville, CA  
Peaceworkers, San Francisco, CA  
PASE (People's Action for Safe Energy), Parthenon, AR  
Pipe Organs/Golden Ponds Farm, Delafield, WI  
Prince Georges Coalition for Peace & Justice, Prince Georges County, MD  
San Luis Obispo Mothers for Peace, San Luis Obispo, CA  
Sheep Mountain Alliance, Telluride, CO  
Sierra Club Lower Hudson Group, Ossining, NY  
Snake River Alliance, Boise, ID  
South Dakota Peace and Justice, Rapid City, SD  
Southern California Ecumenical Council, Pasadena, CA  
Tallahassee Area Community, Inc., Cañon City, CO  
Terra Foundation, San Luis Obispo, CA  
The Gucamole Fund, Hermosa Beach, CA  
The Nuclear Resister, Tucson, AZ  
Three Mile Island Alert. Inc, Harrisburg PA  
Tulsa Peace Fellowship, Tulsa, OK  
UNPLUG Salem Campaign, Linwood NJ  
Uranium Watch, Moab, UT  
U.S.A. Nica Windpower, Inc., Jamestown, RI  
Western Nebraska Resources Council, Chadron, NE  
Wisconsin Resources Protection Council, La Crosse, WI  
Women's International League for Peace and Freedom (WILPF), U.S. Section, Boston, MA  
World Business Academy, Santa Barbara, CA  
[www.SafeEnergyAnalyst.org](http://www.SafeEnergyAnalyst.org), Tucson, AZ  
Yes We Can Tippecanoe, IN