

BEYOND NUCLEAR aims to educate and activate the public about the connections between nuclear power and nuclear weapons and the need to abandon both to safeguard our future. Beyond Nuclear advocates for an energy future that is sustainable, benign and democratic.

The **BEYOND NUCLEAR** team works with diverse partners and allies to provide the public, government officials, and the media with the critical information necessary to move humanity toward a world beyond nuclear.

Some Important Facts

- 1 There are 31 GE Mark I and II boiling water reactors operating in the US today that have the same, or similar, faulty design as those that exploded at Fukushima Daiichi in Japan in 2011.
- 2 The US maintains 8,500 nuclear weapons and Russia 11,000. The US continues to spend \$25-\$35 billion annually on maintenance, research and development of its nuclear arsenal.
- 3 Reactors routinely release radioactivity into the air and water. In addition, US reactors leak radioactivity into the environment including into groundwater.
- 4 The US Department of Energy is considering interim, dispersed storage dumps for irradiated fuel. A preferable option would be to add protection to waste storage at the reactor sites.

The Nuclear Burden

From uranium mining to waste management nuclear power and nuclear weapons demand sacrifices of human health, safety and security. Nuclear power and nuclear weapons are inextricably linked. Nuclear power makes the spread of nuclear weapons more likely.

Nuclear Energy. From Three Mile Island to Chernobyl to Fukushima, the nuclear industry has caused major disasters and near-misses. Countless numbers of people in Ukraine, Russia, Belarus, and beyond – including children born after the Chernobyl explosion – still suffer from its effects. The same long-term suffering will no doubt occur in Japan, where the full impact of the catastrophe may not be known for decades or more. Information about health effects caused by the Three Mile Island reactor disaster has been suppressed. Routine and accidental radioactive releases and spills continue at reactors in the US and around the world.

Nuclear Weapons. The sickening images of Hiroshima and Nagasaki, after the US exploded atomic bombs on both cities, serve as a permanent reminder of the horrors of nuclear war. Soldiers and civilians continue to be sickened by depleted uranium used in the conflicts in the Balkans, Kuwait, Afghanistan and Iraq. The potential for a nuclear war remains, with studies showing even a limited nuclear conflict using 100 Hiroshima-sized warheads could devastate global agriculture and starve at least one billion people. A larger exchange between atomic weapons powers could precipitate a Nuclear Winter.

The Way Forward

Conservation and Efficiency. Saving energy reduces demand, lowers emissions and cuts costs. Using energy efficient equipment in our homes and businesses saves money, energy and the planet. Nuclear power costs far more per kilowatt-hour to produce than implementing energy efficiency.

Renewable Energy. Renewable energy can replace polluting nuclear power and fossil fuels at less financial and environmental cost. Wind power is already the fastest-growing electricity source worldwide. Germany is leading the way in rejecting nuclear energy while aiming for 100% renewable energy by 2050. And while nuclear generating capacity is declining globally, wind and solar are enjoying a steep increase.

Peaceful Conflict Resolution. Nuclear weapons invite, rather than deter, catastrophic conflict. Disarming makes everyone safer. The US and Russia have modestly reduced their stockpiles of weapons, but continue to “modernize” arsenals and delivery systems. Other nuclear powers have made no reductions. India and Pakistan have increased their arsenals. Atomic weapons continue to imperil global survival.



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Beyond Nuclear



Working for a world
free from nuclear power
and nuclear weapons

www.BeyondNuclear.org

NUCLEAR POWER RISKS

1 Nuclear can't "solve" climate change

Nuclear power is too slow to build, dirty, dangerous, and expensive. Cheaper, cleaner, safer and faster energy alternatives exist.

2 Reactors are sitting-duck targets

Even after 9/11, reactor defense was not upgraded to guard against that scale of attack. Plant security is inadequate.

3 Nuclear power is not emissions-free

Reactors emit radioactive gases and liquids. The entire uranium fuel chain uses fossil fuels. Nuclear fuel reprocessing plants release radioactive carbon dioxide.

4 Nuclear power leads to weapons

The spread of civilian nuclear technology around the world invites — and enables — the development of nuclear weapons. The concerns about Iran are a prime example.

5 More generation means more waste

No safe, permanent solution exists — and may never exist — for radioactive waste. Proposals to dump waste on defenseless communities is environmental injustice.

6 Evacuation plans are unworkable

A large, panicked population cannot be evacuated safely. Emergency plans do not address permanent evacuation or even routine traffic congestion challenges.

7 Every reactor produces plutonium

A typical reactor produces enough plutonium every year to make at least 40 atomic bombs, a huge proliferation threat.

8 Reactors have accidents

Operating reactors can and do malfunction. Building new reactors would add to the risk. As Nobel Laureate Hannes Alfvén said, "No acts of God can be permitted."

9 The watchdog is a lapdog

The Nuclear Regulatory Commission, the federally mandated nuclear watchdog, is biased towards protecting industry profit over the public's health and safety.

10 Uranium energy harms health

At every phase of the uranium fuel chain, nuclear workers, children, women and the elderly are most at risk of damage to health.

TEN BRIGHTER IDEAS

1 Choose LEDs for electric light

Long-lasting Light Emitting Diode (LED) bulbs are even more efficient than compact fluorescents, lasting up to 10 times longer, and they use no mercury.

2 Seal and insulate buildings

Properly sealing and insulating homes and commercial buildings can save up to 20% on heating and cooling costs.

3 Efficiency saves more energy

Updating US lighting and appliances, and conserving water, can reduce billions of kilowatt-hours of electricity usage per year.

4 Switch off unused equipment

Turning off and unplugging electrical equipment not in use, and line-drying clothes, can greatly reduce energy consumption and can lower electric bills.

5 Buy green power, like wind

Homeowners and renters alike can choose to buy green power instead of nuclear-generated electricity.

6 Buy local, decentralized electricity

Shifting to locally generated electricity, with fewer transmission lines, increases efficiency of service, creates jobs, and reduces brownouts and blackouts.

7 Increase wind generation

Offshore and onshore wind farms in the US could provide far more electricity than all currently operating US reactors.

8 Renewables are reliable

Several types of renewable energy can provide a constant supply of electricity, especially when energy storage is used.

9 Creating Green jobs

Efficiency and renewable energy sources create safer, long-lasting jobs and can revitalize US industries, like steel.

10 Climate change is under way

Clean energy can be brought on line faster, and more cheaply and safely than nuclear power, without requiring high security and without creating deadly radioactive waste.