

16 Reasons why Nuclear Generation **is not the Answer!**

1 Radioactive Waste Legacy

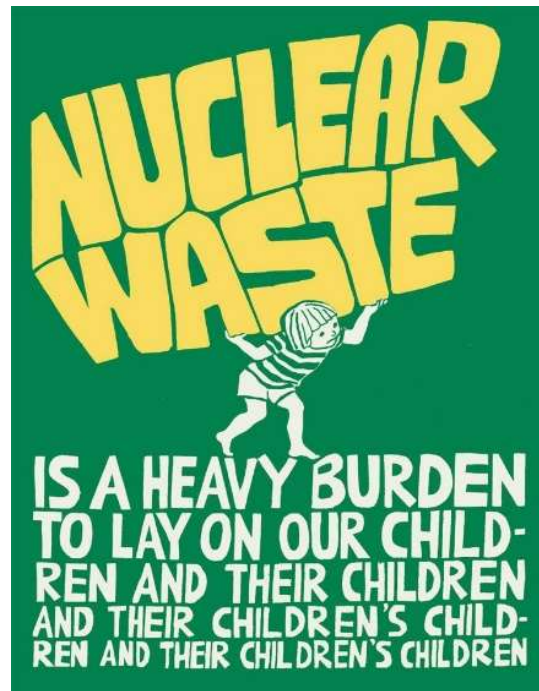
Nuclear power stations are radioactive waste factories.

Growing amounts of radioactive waste around the world have been produced from 70 years of the nuclear technology cycle - from mining uranium, fuel production, generation and nuclear reactor decommissioning.

There is no scientific solution to safeguarding nuclear waste.

Radioactive waste is harmful to health and must be monitored and guarded for thousands of years and kept out of our air, food and water.

We must stop producing more new radioactive waste, a costly and unsolved environmental problem for future generations.



2 Health Problems of Radioactivity

Radioactivity can cause damage to DNA and enzymes in living cells which can lead to cancers and many other long term health effects.

There is no "safe" dose of ionising-radiation; even small amounts of radiation exposure can be harmful. Nuclear power stations are allowed to routinely release low levels of radioactive emissions into the local environment.

Women and children are more vulnerable to radiation damage than men.

Nuclear workers and the public need to be protected from the long term health effects from ionising radiation.

Our bodies cannot see, hear or smell invisible ionising radiation!

3 Nuclear is Not the Answer to Climate Change

No electricity production is ZERO carbon, even wind and solar are low carbon generators. But Nuclear is calculated to produce between 8 and 11 times more carbon emissions than the renewables.

Nuclear Power produces large amounts of greenhouse gases during continuous uranium mining, fuel manufacture and transportation; along with using vast amounts of concrete and steel in building power stations, waste storage sites and decommissioning old reactors.

Nuclear takes too long to build and pay back its greenhouse emissions.

Using steam generation to make electricity means it throws two thirds of all its heat energy into the sea and air - Not helping Global Warming!

4 The Risk of Major Nuclear Accidents

Nuclear power stations and radioactive waste storage sites risk a catastrophic accident, from human error, mechanical failure or natural disaster, resulting in a large release of radioactive material into the environment.

After Chernobyl and Fukushima, where will the next nuclear disaster be?

Most of the world's 400 nuclear reactors are aging and over 30 years old; parts are wearing out and cracking. 5 nuclear reactors have completely melted down, and there have been hundreds of more minor accidents at reactors around the world that rarely make the national news.



Commercial insurance companies will not insure Energy Companies against nuclear accidents. Repair, compensation and damages from nuclear accidents are paid for by governments using taxpayer's money.

5 High Levels of Security Required

Nuclear reactors and radioactive waste storage sites are vulnerable terrorist targets and therefore need constant expensive security measures – Usually the armed Civil Nuclear Police.

Nuclear Radioactive Spent Fuel waste travels around and across the UK by road and rail, usually with little or no security, from power stations to Sellafield in Cumbria for storage and processing.

Renewable energy sites do not need armed security!



Nuclear power stations are very concerned about drone technology and cyber-attacks on the reactor control systems.

6 Nuclear Weapons Proliferation

Nuclear power evolved from nuclear weapons as nuclear weapons can be made from nuclear power waste.



Nuclear reactors were not designed to make electricity (in fact they can't!). They were designed to make the manmade radioactive materials, radioactive waste, to extract the Plutonium needed to make usable military nuclear missiles.

Any country with the engineering technology and knowhow for nuclear power can enrich uranium or reprocess the spent fuel waste to make Plutonium for

nuclear weapons. India and Pakistan have already done this. After WWII national governments marketed Nuclear Power Electricity as “Atoms for Peace”, but this was a cover to continue to produce the Plutonium to build arsenals of nuclear missiles.

7 Economics- Ever Rising Financial Costs

Using nuclear power is an on-going financial black hole!

The financial costs of nuclear power, building reactors, safety regulations, security along with the decommissioning of the reactors and waste disposal keep on rising!

Nuclear electricity is very expensive, and costs keep rising.

Only governments with a never ending pool of tax payer's money can afford nuclear electricity at the cost of their electricity users.

Private financial institutions, having seen the construction disaster delays and rising costs of building nuclear power stations, stay well clear of nuclear. They prefer to invest in renewable energy which can be built much more quickly and cheaper, as the costs keep falling.

8 Uranium Mining

Reserves of Uranium Ores are limited and a rapid expansion of nuclear power would soon exhaust the economical reserves of ore. Using lower grades of ores would mean higher greenhouse gas emissions from the mining machinery.

Uranium mining causes pollution and health problems in the indigenous populations where Uranium mining occurs: Australia, Canada, Kazakhstan, New Mexico and Niger. The uranium miners breathe in the radioactive Radon Gas often leading to lung cancers. Chemicals used in the processing of the uranium pollute the water supplies and radiation from the mining tailings affects the health of women and children in the communities.

Often mining companies having taken the economic reserves, then move on without cleaning up the contaminated lands.

9 Environmental and Biodiversity Damage

Nuclear power stations consume large amounts of water and the living creatures in it! Hinkley C's direct cooling water cooling intakes will, over 60 years, suck in billions of fish and other marine wildlife to a fatal end, seriously damaging the protected wildlife habitats of the Severn Estuary.



Uranium mining and the building of large infrastructures such as nuclear power stations and nuclear fuel and waste storage facilities, over long periods of time, causes the destruction and pollution of natural ecological habitats.

In hot Summers, nuclear power stations on inland rivers have to close down or the hot water pollution from the cooling processes would kill all the river wildlife.

10 Water – Too much or too little Disastrous for Nuclear Power.

Water is essential for nuclear power station cooling and steam generation for electricity production. Far from Nuclear Power being an answer to global warming, the frequent changes occurring with climate change in relation to water will be a big threat to the nuclear industry.



Firstly, the Coastal nuclear power stations, many just a few metres above sea level, will be in direct line to the accelerating rise in sea levels and more frequent storm surges flooding. Most were built without the planning taking into account the rapid changes now being recorded and will have high level waste stored on site for over a hundred years.

Secondly, the inland nuclear power stations will be threatened by periods of drought, meaning lack of water for cooling and threats from forest fires – like those that approached Chernobyl in 2022. Inland rivers also can flash flood with the increasing intensity of huge rain storms and typhoons.

11 Long Time Problems for Nuclear Power

Nuclear Power stations take too long to build, taking decades for each one, and are too slow to contribute anything towards global warming, which needs direct action in the next ten years. New power plants can't be built quick enough to replace the reactors closing down from old age.

It takes hundreds of years to decommission old nuclear reactors, and clean up nuclear accidents.

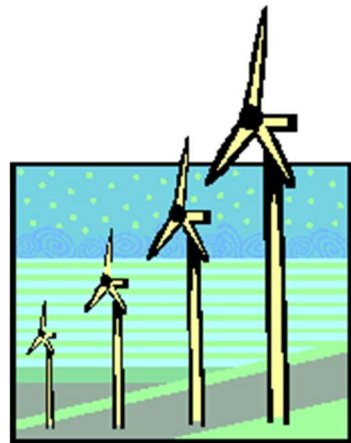
Radioactive toxic nuclear waste spent fuel has to be kept safe and secure for thousands of years.

12 Many more Jobs in Renewable Energy and Energy Efficiency

Renewable Energy, Energy Storage and Energy Efficiency will provide many more jobs around the country and around the world than the nuclear industry.

Most global investment is going into renewables; very few new nuclear reactors are being built.

There will be jobs still in nuclear industry. The nuclear scientists and engineers will not be building new nuclear but will have plenty to do cleaning up the old nuclear reactors and dealing with safely securing the nuclear waste legacy.



Many engineers will transition to new skilled jobs in the renewables industries from fossil fuels and nuclear.

13 Nuclear Centralises Energy Production.

Nuclear Power centralises energy production to a limited number of places it can be produced, and only highly specialised producers.

Who controls and sells this source of electricity?

Renewables mean decentralisation of energy production; we can all produce and collectively share energy with each other. Electricity can be produced on our homes, our farms, our council buildings, our industries and warehouses, in our rivers, on our fields and hills, at sea and under the sea and under the ground from a range of natural energy sources; all without the polluting fossil fuels and nuclear waste.



14 Nuclear is not Sustainable!

Limited reserves of Uranium, a non-renewable fuel, would not be able to supply a rapid expansion of nuclear power.

The only thing about nuclear that is sustainable is the problems of toxic nuclear waste.

15 Undelivered Promises of Old, Failed Nuclear Technology.

Nuclear Technology has constantly failed to deliver on its promises of cheap, clean sustainable energy.

A desperate, failing, nuclear building and engineering industry is using government spin doctors to repackage old dream failed nuclear technology.

Thorium, Breeder, so-called Advanced Small Modular Reactors along with Fantasy Fusion reactors are being thrown research money. These technologies are not real working reactors, but need many more years of research, still with the same old nuclear problems of cost, safety, risk and radioactive waste.

16 Nuclear is Unnecessary!

We are in a great energy transition, where renewable energy technologies and storage along with energy efficiency are replacing fossil fuels and nuclear to supply all our energy needs. Solar, Wind, Hydro, Tidal and Geothermal energy technology can be built quicker than nuclear and costs are falling rapidly. This is recognised all over the world by the International Energy Authority. Solar and Wind will dominate global world energy 90% by 2050.

The majority of nuclear power stations are over 30 years old, nearing the end of their lives. Increasingly many are being closed as too costly to run because cheaper renewables are much more economic.

Natural Renewable Energy could supply 100% of our energy with the political will.



Stop Hinkley - holding EDF to account

What you can do to support our campaign

- Write to your politicians, national or local: <https://www.writetothem.com/> A useful website that enables you to contact your MP, local representatives and members of House of Lords.
- Support Stop Hinkley to demonstrate the strength of feeling against nuclear power both in the South West and nationally. <http://stophinkley.org/support-us/>
- Distribute copies of this leaflet to all your friends. Download copies from the Stop Hinkley website or contact us. <http://stophinkley.org/wp/wp-content/uploads/2023/07/16-Reasons-why-Nuclear-Generation-is-not-the-Answer-Leaflet.pdf>
- Check www.stophinkley.org regularly to keep in touch.



Stop Hinkley was founded in 1983 to campaign against the proposed Hinkley C development. We played a major part in the 14-month public enquiry during 1988-9, including the co-ordination of evidence from dozens of individuals and organisations. Over 20,000 people were encouraged to object.

We have continued to campaign for alternative renewable energy sources and energy conservation measures.

In 2021 we spent £4,000 on a project to analyse the radioactivity in the mud of the Severn Estuary. It was important for us to carry out this investigation as EDF are not willing to do baseline sampling before they dredge radioactive sediment and dump it in the Severn, which will then be dispersed along the coastline.

Stop Hinkley volunteers, in conjunction with an Independent Marine Radioactivity Researcher, collected mud samples along both sides of the Severn Estuary. These were then sent to the Commission for Independent Research and Information on Radioactivity laboratory in France, which showed that significant levels of radioactivity were found on both sides of the Severn Estuary.

We continue to work with other groups and government agencies to counter nuclear industry misinformation.

For further details of the campaign contact:

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