

# Radioactive Waste: The Big, Unresolved Problem of Nuclear Power



Nuclear power stations, and nuclear weapons production, create nuclear waste, which must be isolated from people and the environment for thousands of years. There is no long term high level radioactive waste storage facility anywhere in the world.

## What is Radioactive waste?

When spent uranium fuel comes out of a nuclear reactor, it is highly radioactive. Radioactivity naturally decays over time, so radioactive waste must be stored in secure facilities until it no longer poses a risk to human health. The length of time depends on the type of waste: it can range from a few days for very short-lived isotopes to millions of years for high level radioactive waste.

## What is currently done with radioactive waste?

Initially nuclear waste is stored at the nuclear power station site, before being sent to Sellafield. High level waste is

treated to extract plutonium for use in nuclear weapons, then stored at Sellafield.

Low level waste is stored at Drigg near Sellafield, which is at risk from rising sea-level as it is near the coast.

## Radioactivity and Health Problems

Radioactivity can cause damage to the DNA structures and enzymes in living cells, and can lead to cancers and many other health effects.

*In 2008, a German government study reported an increased level of leukaemia and other cancers among children living within 5km of all 16 German reactors.*

*Since the 1986 Chernobyl accident, life expectancy in Belarus has gone down by 20 years.*

*We are yet to see the full detrimental health effects from the 2011 Fukushima disaster in Japan.*

## How much does this cost ?

Two thirds of the Government's Department of Energy and Climate Change budget is used on nuclear waste and the clean-up of nuclear facilities.

**The cost of trying to keep  
radioactive waste safe will be a  
financial burden forever!**

## So what is the Solution ?

There is **no** scientific solution to nuclear waste in sight. Not for the legacy waste from the last 60 years of production, nor for any nuclear waste produced in the future.

The first step must be to stop creating **more** radioactive waste – and the second step is that all existing waste must be:

- Isolated from the ecosystem,
- Not reprocessed in any way,
- Not transported but stored close to where it is produced,
- Constantly monitored,
- Stored above ground, clearly labelled,
- Stored at well signposted and guarded sites,
- Well documented for future generations, and
- Have ring fenced financial resources to maintain storage sites.

## No New Nuclear Waste Dumps - Not in Wales, Not anywhere!



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