



Hinkley on fire!

Threat to nuclear waste store



After two days of fires, smoke and evacuation, emergency workers are still not in control. Tanya Howitz reports:

This article is a glimpse into what could happen if the Hinkley Point C nuclear power station is built. We hope it never is. To find out why Hinkley C is a bad idea – for safety, economic and environmental reasons – see www.stophinkley.org

A heavy black cloud of smoke hung over the Hinkley Point site near Bridgwater yesterday as firefighters fought to contain a blaze near storage vaults for highly radioactive waste.

The fire is believed to have started in spilled diesel oil from the back-up generators which provide cooling if there is a loss of mains electricity. A tight security blackout was maintained round the site, making it difficult to determine whether the fire might have led to any release of radioactive materials.

The waste storage vaults, located next to the now defunct Hinkley Point C nuclear power station, contain an estimated 3,000 tonnes of “spent fuel” – used fuel assemblies regularly removed from the two reactors over their 40 year operating life.

This “high burn-up” uranium fuel is hotter and more radioactive than any used before by the British nuclear industry.

The operators, EDF, have faced a constant battle to keep the storage vaults cooled in order to stop their volatile contents from overheating or spilling. In 2090 there was a leak from the vaults, sparking an alert in the nearby village of Stogursey. 200 people were asked to leave their homes until the situation had been assessed.

Everyone living in the immediate vicinity of the power station now has to wear a personal radiation monitoring device.

Flooding risk

There is also a threat of flooding from the Bristol Channel, only a few hundred metres from the vaults.

In 2100 the sea, whose level had risen steadily over the 21st century, breached the defences and penetrated the vault containment. Although officials admitted that some radioactivity had escaped, they emphasised that there was no need for the public to worry. They also now admit that the effects of climate change on sea levels have been more extreme than expected, and their response less effective.

Dump delayed

There is still no start date for constructing the underground “repository” which would be used to bury radioactive waste from decommissioned nuclear power stations around the country.

The original plan was for the spent fuel from Hinkley C to be transferred to a national waste disposal site. This was supposed to open soon after 2040. But there are still ongoing arguments about where it will be sited and whether this is acceptable to the local community.



Hinkley C: A Very Expensive Mistake

The Hinkley C power station never worked properly, mainly because of computing error breakdowns. After cracks appeared in the concrete foundations, it was retired before its expected 60 year lifespan. Although locals were promised employment during its construction and operation, all the best jobs went to outsiders.

Hinkley C has cost the British public billions of pounds in subsidies, as well as the hidden costs of insurance cover and managing its aftermath of radioactive waste. Many local people now ask whether this money could have been better spent on other more reliable and less risky projects.

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Step back 100 years and trace the origins of this disaster. See centre pages

Why we don't need Hinkley C

Today (2012) there are two existing nuclear power stations at Hinkley Point on the Somerset coast. The oldest, Hinkley A, closed in 2000. Hinkley B is still operating, despite cracks in the reactor core, but is due to close in the next decade.

The French electricity company Electricite de France (EDF) now plans to build the largest nuclear power station in the country next to the existing Hinkley plants. The new development is called Hinkley "C".

This would be the first new nuclear power station in Britain for over 20 years. The government says that Hinkley C will be safe, economic and is urgently needed to combat climate change.



Five reasons why they're wrong:

1. Risks to health & safety

Nuclear power stations risk a catastrophic accident resulting in a large release of radioactive material into the environment. This is what happened at Chernobyl in 1986 and again at Fukushima in Japan in 2011 (see panel). This potential for a release of deadly radiation into the atmosphere makes nuclear power stations a prime target for a terrorist attack.

The reactors proposed for Hinkley are a new French design with no operating track record. Safety issues are still not resolved. Radiation from the routine operation of nuclear power stations can affect the health of people living nearby. Studies show increased levels of cancer and infant deaths downwind of Hinkley Point and in Burnham-on-Sea.

2. Hazardous Waste

Nuclear power in Britain has already left a trail of hazardous material to be guarded well beyond our lifetimes. There is still no final disposal site to securely contain this waste, let alone that from any new power stations.

The highly radioactive fuel from Hinkley C would be stored on site, despite the risk of sea flooding, for at least 100 years.



Residual radioactivity means that shut down power stations, like Hinkley A, take decades to clean up. They will then have to be securely guarded for decades more. Some nuclear waste will remain radioactive for up to a million years.

3. Massively Expensive

Nuclear power has always proved more expensive than predicted, with regular subsidies and loans from the government. The cost of decommissioning our existing nuclear plants has risen to a massive £70 billion. Most of this bill will be picked up by taxpayers.

The new generation of nuclear plants are proving just as expensive. In France, an identical reactor to the one planned for Hinkley has almost doubled in cost from €3 billion to €6 billion. EDF is now asking for a massive government subsidy to build Hinkley C.

4. There are better ways to reduce CO₂

Reducing the amount of carbon dioxide (CO₂) produced by power stations is good for the climate. But nuclear power produces more CO₂ than is claimed.

Using renewable energy instead would save much more carbon dioxide and avoid all the problems of waste and accidents.

"We need to learn to be good ancestors"

Ralph Nader

5. Building Hinkley C will bring more problems than benefits

Over 400 acres of agricultural land, woods and hedgerows will be sacrificed and coastal nature reserves damaged. The area will be blighted for up to ten years. Already overcrowded roads will be jammed with heavy vehicles, noise will echo through the local villages. The coastline will be scarred by a jetty to bring in aggregate.

A new line of the largest overhead pylons will stretch 37 miles from Hinkley Point to Bristol. Only 20% of construction jobs will go to people from Somerset. Local democracy has been overruled. There will be no public inquiry into EDF's plans and the final decision will be taken by the government.

Fukushima: A terrible warning

In March 2011 an earthquake followed by a tsunami severely damaged four nuclear reactors on the coast of northern Japan. The fuel inside them melted, releasing radioactive material into the atmosphere and sea.

Eighteen months later more than 150,000 people cannot return to their homes, children have to wear masks in school playgrounds and health effects are emerging. Over a third of nearly 40,000 children living near Fukushima have abnormal growths on their thyroids.

If an accident like Fukushima happened in Somerset, the town of Bridgwater would have to be evacuated.

It *could* happen here. In 1607 a massive wave swept inland from the sea across the area where Hinkley Point is now, killing 2,000 people.

The Japanese have learned to their cost that nuclear power can come up with unpleasant surprises. All 54 reactors operating in the country were shut down after the accident and the government is now planning to abandon nuclear completely.

The Lights Won't Go Out!

The UK can keep the lights on and reduce its carbon footprint without falling back on nuclear power. This will need a much stronger commitment to energy saving and increasing our range of renewable energy sources.

Every year, we throw away more than eight times the amount of energy supplied by all of the UK's nuclear power stations combined. Pound for pound, reducing energy demand is the most effective way to cut emissions of carbon dioxide (the main greenhouse gas contributing to climate change).

While the cost of nuclear power escalates, renewable energy gets cheaper. Solar photovoltaic panels are expected to be cost competitive with coal-fired electricity by 2020.

Surrounded by waves, tides and windy coasts, we are already committed to generating more of our electricity from renewables. Other countries are showing the way. Germany (population 80 million) currently gets 20% of its electricity from renewables and is looking for at least 80% by 2050. At the same time it is phasing out nuclear.

For more information on the arguments against nuclear power and what you can do about it:

Stop Hinkley - www.stophinkley.org

Stop New Nuclear - <http://stopnewnuclear.org.uk>

Greenpeace - www.greenpeace.org.uk



The Way Forward: Renewables!



Britain already gets about 10% of its electricity from renewable sources. This could rise to 19% by the end of this decade (2020), as much as is generated now by nuclear power. By then, even if it went ahead soon, Hinkley C still wouldn't be in operation.

No Subsidies for Nuclear Power

Every year the UK government already spends £200 per household on decommissioning old nuclear plants but only £25 per household to support renewables. Now there are plans to spend even more subsidising new nuclear power stations like Hinkley C. This could cost every person in the country an extra £83 on their fuel bill. Don't let them pour good money after bad.

What you can do to stop Hinkley C

- Write to your Councillors and local MP objecting to the plans
- Join the Stop Hinkley campaign – see: www.stophinkley.org
- Write to Edward Davey, Secretary of State, Department for Energy and Climate Change, 3 Whitehall Place, London SW1A 2AW (sample letter below)



Dear Edward Davey,

No subsidies for nuclear power

After the disaster at Fukushima in Japan, please ensure that EDF does not build a new nuclear power station at Hinkley Point in Somerset by sticking to the original Liberal Democrat policy of:

1. Opposition to a new generation of nuclear plants
2. A pledge to increase the amount of renewable generation, aiming for 100% by 2050

We urge you to abandon the subsidies for nuclear power proposed in the new Energy Bill. The money would be better spent on cleaner, safer options.

Yours.

Renewable energy is quicker and safer than nuclear

Renewable energy options include:

- **Wind:** the windiest country in Europe is already the leader for offshore wind farms.
- **Biomass:** this covers everything from wood fuel to agricultural wastes to fast-growing crops like elephant grass (miscanthus) or willow. The fuels are used in small power stations or bio-digesters.
- **Waves and tides:** we are already the leader in wave and tidal power technology, both well on the way to being commercially viable. A tidal barrage or reef across the Severn Estuary could produce up to 6% of the UK's electricity.
- **Solar:** even in temperate Britain the sun can help generate most of the electricity needed in the average house.
- **Home generation:** every house in the UK could produce its own energy from solar panels (for water heating or electricity), a ground source heat pump or a small wind turbine.
- **Combined heat and power:** producing both electricity and heat from the same source, such as a boiler fuelled with wood pellets, is the most efficient use of a renewable fuel.

Atlantic Array Offshore Wind Farm

Power company RWE is planning to build the first offshore wind farm in the Bristol Channel. With an installed capacity of about 1,000 Megawatts it could generate enough electricity for 750,000 homes. Located 14 kilometres from the Devon coast it could be the forerunner of many similar developments in the future.

RWE recently announced it was pulling out of plans to build nuclear power stations in Britain because of financial uncertainty.

When there is a huge solar energy spill it's just called "a nice day"

votesolar.org

Clean energy

Clean energy comes from the Earth's natural resources - sunlight, wind, waves, tides and geothermal heat. As a source of power it has two great advantages: it will never run out and does not pollute the planet or cause dangerous climate change.

Clean energy is versatile. It can meet a broad spectrum of our power demands – from supplying major cities to powering small settlements in remote locations, unconnected to any electricity grid.

It is adaptable. The sheer range of clean technologies available to us means that one technology or another will be appropriate for almost every community – and can be built close to where it is actually needed.

It is abundant. Solar power alone has the potential to meet the world's energy needs many times over. Here in Britain we have more than enough wind, wave and tidal resources to meet our own energy needs and export to other countries.

And it is perfect for the UK, which has some of the best and most accessible clean energy sources in the world. We could, and should, be global leaders in the field, reaping huge industrial, economic and employment advantages by being at the forefront of the fastest growing new technologies.



For more info on renewables and saving energy:

Quantock Eco – www.quantockeco.org.uk

Centre for Sustainable Energy, Bristol – www.cse.org.uk

South West Renewable Energy Agency – www.regensw.co.uk

Greenpeace – www.greenpeace.org.uk



Bridgwater Courier

Courier Appeal

Last week the Queen Mum opened Bristol's brand new **Welcome Centre for Climate Refugees**. We invite readers to donate money, food, tools and toys for this great cause. See page 13 for more details.

Tuesday 6th October 2112

www.stophinkley.org

Est. 1986

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Somerset Jobs

Most of the hardware for the renewable generating stations in the South West is produced at various locations across Cornwall, Devon, Somerset and Dorset. A total of 10,000 people are employed in the sector.

Solar power has also taken off, with one in three homes in Somerset now fitted with electricity-generating solar panels. Many householders have installed super-efficient boilers which provide both heat and electricity. Most cars in the county run on fuel cells or solar units, with a minimal input from dwindling petrol stocks.



Tidal Festival

The Severn Tidal Generating Station celebrated its 70th anniversary today with a flotilla of boats passing through its shipping channel.

The event was attended by a host of both Welsh and English celebrities.

One of the biggest success stories of Britain's renewable energy revolution, the tidal scheme generates enough electricity to meet about 5% of current national demand across the UK.

The original designs had major environmental and wildlife problems and were rejected. New research resolved all these issues.



The success of the Severn Tidal scheme has been repeated in a number of other estuaries along the west coast of the British Isles.

Wind & waves power the South West

The South West now gets nearly all of its electricity from a range of renewable energy generating stations located around the region.



These include:

- **Five large wind power arrays** in the Bristol Channel, each generating enough electricity for about a million homes. The first one to start operating, the Atlantic Array, recently replaced its turbines with new more powerful models.
- **Cornwall's Wave Hub** provides a connection to ten different wave generating devices located about 15 kilometres from the coast, each sending back power for homes and businesses in the peninsula.
- **A network of underwater tidal stream turbines** along the coastline feed electricity into the grid.
- **A hundred local bio-digesters** using agricultural wastes make a major contribution to the power supply for small towns.

Bridgwater's Blade Bonanza

Blades for the wind turbines turning in the Bristol Channel are being manufactured at a large factory in Bridgwater, originally the site of a Morrisons supermarket warehouse. Over 400 people now work there.

The blades, up to 100 metres in length, are made in giant moulds from composite materials including recycled carbon fibre. They are transported to the coast in special convoys, ready for shipping out to the wind farm sites.

Joy Maunder, who works at the Bridgwater blade factory, said it was the best job she had ever had:

"I really like helping to make something that is not going to harm the planet like those old power stations we've got rid of."

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This newspaper was produced by the Stop Hinkley campaign

www.stophinkley.org

Germany Sets Example

The articles on this page could become reality

Germany, the world's fourth largest economy, has already decided to phase out nuclear power within ten years and move steadily towards an electricity supply based on renewable sources. By 2050 the country expects to get 80% of its electricity from renewables such as wind energy, solar power, geothermal and biomass. In the UK we could follow the same route to a cleaner, greener future.

Problems caused by the variable nature of some renewable generators have been solved by a mixture of energy storage and sophisticated control systems which balance out the inputs from different sources.

In 2050, the British Unity government adopted a policy which would see the phase out of nuclear power, the closure of all fossil fuel-fired power stations and an accelerated switch towards renewable electricity.