



Previous Generation

Ten reasons why nuclear power
makes no sense for Ireland



Nuclear: Still not the answer



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1

The cost of providing back up power for nuclear is prohibitive

Electricity Grid operators need to have back up power they can immediately call on should a power station shut down unexpectedly, as frequently happens. This back up power is called 'spinning reserve' and it has to be the same size as the biggest power plant in the system. At the moment we have a total electricity generating capacity in Ireland of 5,000 Mega Watts (MW). Efficient nuclear power plants are at least 1,000 MW in size. If we were to build such a plant in Ireland we would need three gas-fired plants running on standby in case the nuclear plant has to be shut down. Using the inter-connector to the UK does not solve the problem as it would have to be on permanent standby rather than active use if it were to provide the necessary cover. Even international experts who advocate nuclear power recognise this problem and admit that nuclear power would not be suitable for Ireland.

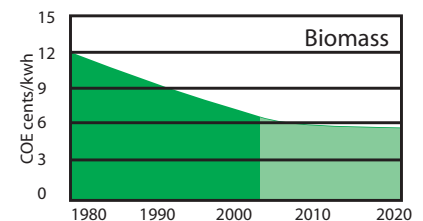
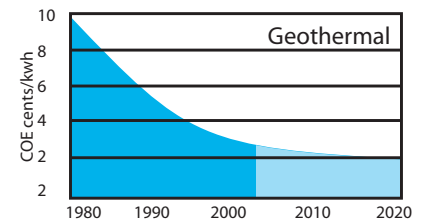
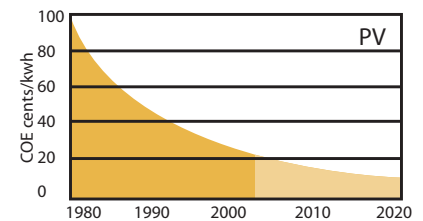
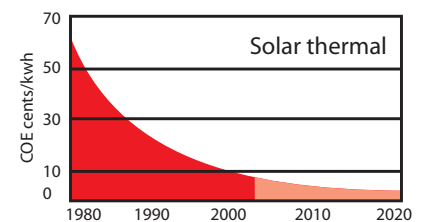
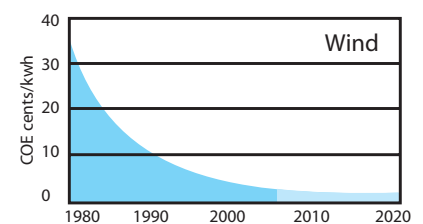
2

Renewable resources can provide the necessary power

The ESB International (ESBI) has estimated that our untapped wind resources are equivalent to nineteen times the ESB's total generation capacity. We should be using future interconnection to export this wind power and become the green energy supplier for the rest of Europe. At home we will be able to develop a multitude of other renewable power supplies to provide clean efficient and cheap power. Biomass crops are already proving to be economic and we could lead the world in new technologies such as wave and tidal power. Green Party analysis shows that we could have up to 50 per cent renewable supplies by 2020 and there is no reason why we could not be 100 per cent renewable by the middle of this century.

Renewable Energy Cost Trends

Levelized cent/kWh in constant \$2000



source: www.rmi.org

3 Nuclear power will not solve climate change

A doubling in global nuclear power by 2050 would only lead to a 5 per cent reduction in global CO2 emissions. This is less than one tenth of the reductions scientists say we require. Rather than being a magic bullet to solve our climate change problems, nuclear power is a distraction from the real issue. It allows people to think an easy solution is available which avoids urgently needed changes in other areas. For Ireland the greatest energy challenge will be in changing our transport and housing systems. Improvements in this area will not be easy but it will bring social, economic and environmental gains. The sooner we realise that nuclear is not the issue and not the solution for Ireland, the sooner we can start tackling the real energy agenda.

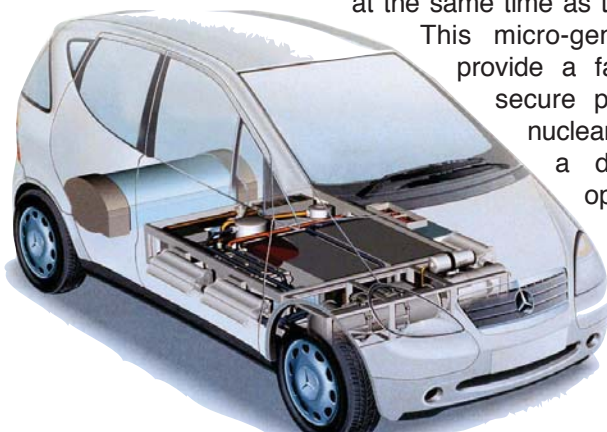
4 Energy efficiency provides a better economic and environmental return

Amory Lovins of the Rocky Mountain Institute (www.rmi.org) argues that investment in end use efficiency programmes can deliver up to ten times the gains in comparison to money spent on nuclear power. The Green Party is already setting new energy efficient building standards within local authority development plans which will cut in half the power use in our buildings and save householders thousands of euro each year. Switching our car fleet to fuel efficient engines would save as much energy as a nuclear power plant would provide. Switching off our televisions and radios from standby could save the equivalent power produced by two of our peat fired power stations. All these measures save the Irish public hard cash with no loss of the services energy provides.

5 Nuclear will not heat our homes nor power our cars

Our energy use is divided equally between electricity generation, transport and heating. As oil runs out we may have to power our cars by hydrogen or by electric battery. Both these forms of stored energy are generated from electricity but it makes more sense to use intermittent wind power rather than nuclear to provide them. Already wood chip and pellets are cheaper than oil or gas as a means of heating. By using smart new micro heat and power systems we could have householders feeding power back to the grid at the same time as they heat their homes.

This micro-generation system will provide a far more flexible and secure power supply than a nuclear power plant which can take a day to heat up to operating temperatures.



6 A centralised and subsidised state solution versus tens of thousands of Green jobs

At the moment more energy is wasted in our centralised electricity transmission and generation system than is used heating every house and apartment in this country. These losses come from waste heat sent up power station chimneys and in power used up in transmission power lines. Nuclear power would only further enforce this wasteful centralised system. The alternative Green vision is where thousands of local generators provide power and heat for local homes and businesses. This system is much more efficient, cleaner and cheaper and will create tens of thousands of jobs throughout the country. The nuclear option sends the two to three billion construction cost out of the country to an overseas contractor.

7 The waste problem has never been solved

A major study by a team of professors at Massachusetts Institute of Technology (<http://web.mit.edu/nuclearpower/>) came to the conclusion that no one has yet resolved the challenge of what to do with the long-term storage of nuclear waste. The United States Government has designated a site in Yucca Mountain in Nevada as an underground storage site but it has yet to be opened due to safety concerns. Geologists need to know that the site will stay dry for tens of thousands of years but such constant conditions are impossible to predict given the way our climate is changing. It is one thing for a country that already has a waste problem to decide to keep its plants running or to commission new plants but it makes no sense for a country without this waste problem to now take it on.

8

It is still not safe

Twenty years after Chernobyl, scientists still have no idea how to treat the reactor, which is temporarily encased in a corroding concrete shell. Meanwhile, an area the size of county Cork in Belarus is now permanently uninhabitable because of the accident. Human error and management lapses are the most common causes of accidents and they will, unfortunately, always be with us. The reprocessing of nuclear fuels, as occurs at Sellafield, presents particular hazards for public health. 83 per cent of the collective EU radioactive dose from the nuclear industry comes from such fuel processing discharges.

9

Uranium is also a depleting resource

To replace the energy the world currently gets from fossil fuels would require us to build 10,000 of the largest nuclear power plants worldwide. We do not have the capital to do that nor the uranium to power them for more than a few years. Lower grade uranium resources require much more energy output in the mining and processing of such fuels. Professor Bertrand Bareé, scientific advisor to the French nuclear power company, Areva, stated at a recent U.C.D. energy conference that we would start running out of suitable uranium by the middle of this century. He suggested we would then have to build 'fast breeder' reactors. The safety record of these plutonium fuelled power plants is much more questionable.

	Spent Fuel from Power Reactors (tonnes p.a)	Plutonium Production from Power Reactors (tonnes p.a.)	Potential Additional Plutonium Weapons (annual)*	Reactor Core Damage Accident Frequency*	Longevity of high-grade uranium ores	Longevity of all conventional uranium ores
Current Nuclear Output	13,000	70	7,000	1/30 yrs	50 yrs	200 yrs
Three-fold Nuclear Expansion	39,000	210	21,000	1/10 yrs	15-20 yrs	60-70 yrs
Ten-fold Nuclear Expansion	130,000	700	70,000	1/3 yrs	5 yrs	20 yrs

*Assuming 10kg of plutonium for one nuclear weapon

source: www.melbourne.foe.org.au

** Assuming a risk of one in ten thousand per reactor per year

(Friends of the Earth - Australia)

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Nuclear power leads to nuclear weapons

If we turn to nuclear power then we have to expect that other countries would demand the right to the same power supplies. The fear is that countries which can enrich uranium for nuclear power will then also process such fuel for nuclear weapons. The greater the availability of nuclear power the greater the chance also that terrorists could avail of materials to make a crude nuclear device. Flying a plane into a nuclear plant would just as easily turn it into a nuclear weapon.