FAQs about The Wilderness Society's Nuclear Campaign

1. Why is The Wilderness Society involved in a nuclear campaign?

All life on Earth is potentially affected by the nuclear industry. The Wilderness Society is working to protect Australia's natural environment, as well as current and future generations which the nuclear industry threatens.

Nuclear debris from French nuclear tests at Mururoa Atoll in the South Pacific has been found in the Antarctic;

Pine trees near the Chernobyl nuclear plant in Ukraine are altering their DNA in response to the radioactive fallout from the reactor accident in 1986;

In 1998 pigeons near the UK Sellafield reprocessing plant were found to be radioactive and their droppings had contaminated a local residential garden. The birds were so contaminated they were classified as radioactive waste and the garden had to be decontaminated;

Children born after the Chernobyl explosion in 1986 are being born with birth deformities.

2. Why focus campaign activity now?

- There is a big push to expand uranium mining in Australia;
- The Government is trying to build a national nuclear waste dump in remote Australia;
- The Government is considering building a uranium enrichment plant in Australia;
- The Government is considering joining a United States initiative – the Global Nuclear Energy Partnership (GNEP) – which would entail Australia enriching uranium and becoming an international nuclear waste dump.

Uranium mining: Uranium exploration companies have dramatically increased their activities in the last two years – particularly in South Australia (SA) and the Northern Territory (NT). In SA, uranium exploration is at its highest level in 25 years, and in the NT about 30 companies are exploring for uranium, up from two companies a few years ago.

Uranium mines produce large quantities of waste which can contaminate surrounding land. The waste contains about 80% of the radioactivity of the original mined ore. It remains dangerous for more than 100,000 years.

We are still managing the tailings waste from Australia's 1950 mines. These mines were tiny compared to their modern counter-parts. Over its full life the Roxby Downs (Olympic Dam) uranium mine will produce 180 million tonnes, or 400 hectares of tailings, equal to about 150 football fields each 30 metres high. The Ranger uranium mine in the Northern Territory has a radioactive tailings stockpile of more than 30 million tonnes. At the Beverley uranium mine radioactive and acidic liquid waste is simply dumped in an aquifer with no attempt at remediation.

Waste dump: The Australian government is trying to select a site to store short-lived and long-lived radioactive waste. The current focus is on four sites in the Northern Territory. The waste will be dangerous for 250,000 years.

GNEP: The Government is considering joining US President Bush's Global Nuclear Energy Partnership, which aims to expand nuclear power throughout the world by having a small number of countries lease fuel rods and take back the high level waste.

Prime Minister John Howard has established a nuclear review which will consider an enrichment and fuel rod fabrication industry in Australia. What Howard doesn't mention is Australia's quid pro quo: taking back the high-level radioactive waste from the spent fuel rods.

The global nuclear industry believes Australia is the ideal international waste dump for long-lived radioactive waste, due to our stable geography and stable political system. However, there are no proven safe storage options anywhere in the world for nuclear waste. The United States Environmental Protection Agency has been required to develop standards to guarantee the safety of its proposed high level radioactive waste storage facility for one million years… a scientific impossibility!

3. What's wrong with nuclear power?

- Nuclear power is too dangerous, too destructive, too dirty, too divisive and too expensive.

Too dangerous: As Swedish physicist and Nobel laureate Hannes Alfvén warned "Atoms for peace and atoms for war are Siamese twins". There are now more states in the world that have or are believed to have nuclear weapons than during the Cold War.

Too destructive: The Chernobyl nuclear power disaster killed and continues to kill an estimated 40,000 people. There are 60 nuclear power reactors around the world with cracks in them and the potential for another serious nuclear accident is real.

Too dirty: The industry produces waste that's lethal to people and highly toxic to the planet. Waste from nuclear power production remains dangerous of 250,000 years. The world has amassed about 270,000 tonnes of nuclear waste so far, with no proven method of safe storage.

Too divisive: Wherever nuclear facilities are proposed – be it power plants, waste dumps, or uranium mines – people will fight them, and governments resort to tactics to oppose the community's will. The results can be socially divisive, particularly amongst Indigenous communities. Environmental and community safety standards are removed, weakened or ignored. Secrecy and a lack of accountability are central to the nuclear industry.

Too expensive: Nuclear power plants cost billions of dollars each, and are heavily subsidized by governments. Then there's the cost of decommissioning, which – as in the UK – also runs into the billions of dollars for each plant. The management of waste for thousands of years is yet another huge cost. The enormous subsidies from governments reflect the geopolitical and military nature of the industry.

4. Isn't nuclear power a part of the solution to climate change?

- We don't need nuclear power to avoid dangerous climate change – in Australia or globally. Nuclear power should never be part of the solution to global warming.

The nuclear power industry is promoting itself as climate friendly. Yet, the mining, milling and transport of uranium produce carbon dioxide (CO_2) emissions. Uranium enrichment plants are high energy users. The construction of nuclear power plants, followed by their decommissioning and the transport of nuclear waste all produce CO_2 emissions. Over their life cycle nuclear power plants, using fuel from low grade uranium ore, produce about the same volume of CO_2 emissions as combined cycle gas turbines.

Nuclear power is also too slow to avoid dangerous global warming. It's been estimated that it would take 30 years for a nuclear power plant to become CO_2 neutral (Professor Ian Lowe, pers. comm.). If we are to avoid dangerous climate change, greenhouse gas emissions must peak and start to decline in the next 10-15 years. Nuclear as a solution to global warming is pure propaganda.

Given the accelerating pace of climate impacts, how can we imagine what the world will look like in 25,000 years or even 100,000 years. Twenty-four thousand years ago (equivalent to the half-life of plutonium-239 – a 'byproduct' of nuclear power), the site where Finland is building a new nuclear power reactor was buried under 3,000 metres of ice. If the Greenland Ice Sheet were to melt completely and disrupt the Atlantic Gulf Stream, Europe could be plunged into a new ice age. How would this affect the operation of nuclear power plants and the management of nuclear waste which remains dangerous for 250,000 years?

5. What can we do to avoid dangerous global warming?

- The world can avoid dangerous climate change by stopping global deforestation, rapidly restoring key forest areas, maximizing energy efficiency and scaling up renewable technologies.

Stop global deforestation and rapidly restore key forest areas: Global deforestation produces about 25% of the world's anthropogenic (human-made) greenhouse gas emissions. Stopping tropical deforestation around the globe would also protect the world's severely threatened biodiversity. In Australia, broadscale land clearing still takes place in New South Wales and Tasmania, while old-growth forests continue to be logged in Tasmania and Victoria; this should cease immediately through legislative action.

Be efficient with energy: Australia has the highest per capita greenhouse emissions of any OECD country. We can make huge gains in energy efficiency. This applies to all sectors of the economy – from industrial, to commercial to residential. Only the most energy efficient appliances and products should be available on the market.

Go renewables: We can scale up wind, solar, appropriate biomass, tidal and geothermal. Already wind power is a multi-billion global industry. Australia should be riding this wave. Instead the Federal Government appears intent on blocking wind power proposals.

Gas is a bridge to the future: Burning natural gas releases only about half the amount of CO_2 compared to brown coal, and about 60-70% compared to black coal. Replacing coal fired power stations with gas would make huge CO_2 savings, whilst we scale up renewable technologies.

6. Hasn't the problem of nuclear waste been resolved by now?

- After 50 years of nuclear energy, the world still doesn't know what to do with long-lived nuclear waste. No long-term waste storage facility exists anywhere in the world.

Over the last 50 years, the nuclear power countries have generated about 270,000 tonnes of radioactive waste. This waste will remain radioactive and harmful to people for 250,000 years. Anatomically, modern *Homo sapiens* appeared on Earth about 100,000 years ago.

The US has been trying to construct a long-term national nuclear waste dump at Yucca Mountain in Nevada. But the community and the State of Nevada are fighting it every step of the way, due to poor site selection and a host of other environmental problems. The delay in constructing Yucca Mountain has cost billions of dollars and there is no certainty that the problems associated with the site can be fixed or that the dump will eventually be built.

The second most contaminated site in the world after Chernobyl is Handford, southeastern Washington: 53 million gallons of high level radioactive waste are stored there in 177 tanks, leftover from the production of nuclear weapons. One million gallons has leaked and is migrating towards the Columbia River.
One million people live downstream of the leak: http://www.cbsnews.com/stories/2005/09/26/search/main886284.shtml?source=cbsvideos&searchString=Lethal+and+Leaking&sort=1&type=all&num=10&offset=0.

A company called Pangea came to Australia in the 1990's to find an international nuclear waste dump. By 2000 it had spent $15 million but, due to community and state government resistance, Pangea decided to explore South Africa and South America instead. Pangea has since morphed into ARIUS, the Association for Regional and International Underground Storage. The hunt is still on for an international waste dump.

7. Chernobyl was a disaster, but aren't nuclear power plants much safer now?

- Since Three Mile Island and Chernobyl, there has been a litany of leaks, accidents and near accidents from nuclear facilities around the world.

The safety risks associated with nuclear power haven't gone away. Here are just a few recent examples:

Sept. 30, 1999 Tokaimura, Japan: an uncontrolled chain reaction in a uranium-processing nuclear fuel plant spewed high levels of radioactive gas into the air, killing two workers and seriously injuring one other.
(See: http://www.infoplease.com/ipa/A0001457.html)

2002 Davis-Besse, Ohio, USA: severe corrosion of the stainless steel reactor vessel head meant that only half an inch was left of a 6 and a half inch liner. This 'serious incident' could have resulted in an explosion, setting in train a core meltdown.
(See: http://www.nirs.org/press/03-13-2002/1)

2003, Paks, Hungary: a 'serious incident' occurred when 30 nuclear fuel rods assemblies kept in a cleaning tank became damaged, breaking many fuel rods. The damaged fuel requires storage in the spent nuclear fuel pond until further action can be taken.
(See: http://www.iki.kfki.hu/radsec/nuclear/NuclearPhysicsGroup.htm)

July 26, 2006 Sweden: a short circuit in one of Sweden's ten nuclear power plants resulted in near nuclear meltdown and forced closure of the plant. This incident only narrowly avoided becoming another 'Chernobyl'. Three other plants at risk in Sweden were also forced to close.

Early August, 2006 Czech Republic: Czech officials shut down one of the country's six nuclear reactors because of what they described as a serious mechanical problem that led to the leak of radioactive water. In Germany, environment groups responded by calling for the early closure of Germany's 17 nuclear power plants, many of which are the same design as the Czech reactor. Austrian campaigners and some politicians also called on the Czech Republic to close down the faulty reactor.

The risks of nuclear power have increased dramatically in recent times due to the threat of terrorism. In 2004, the research reactor at Lucas Heights in southern Sydney was found to be a potential terrorist target.

8. If an Australian Government were to introduce a price on carbon pollution (which the environment groups support), wouldn't nuclear power plants become economically viable?

- A price on carbon pollution would change the economics of the energy market and start to favor nuclear, but the full costs of nuclear are still likely to be heavily subsidized by the government (and therefore the public).

The cost of decommissioning the UK's aging stock of power plants has been estimated at £70 billion (A$170 billion). This figure is likely to rise further, based on other countries' experience with decommissioning. Then there is the cost of building a high level waste dump and managing it for 250,000 years. So far, the Yucca Mountain high level waste dump in the US (which hasn't yet been completed, and may never be) has cost $4 billion.

The Australian Nuclear Science and Technology Organisation (ANSTO) released a report this year (2006) which claims that nuclear power is competitive with coal. The report finds that nuclear power plants can be cost competitive without a carbon tax, provided that the risks of nuclear power are shared amongst the owner(s) of the plant, government (ie taxpayers) and other stakeholders. Clearly, ANSTO wants to spread the risk to the Australian people.

The Australian Bureau of Agriculture and Resource Economics (ABARE) also released a report this year which looks at a number of energy scenarios. Two of these include nuclear power. One scenario finds that with a carbon tax of A$22 per tonne of CO_2 equivalent by 2020, nuclear power becomes economically viable in Australia. It assumes that one nuclear power plant would be operational by 2020, meaning that initial plans to develop the power plant would need to start soon (nuclear power plants take about 10 years to become operational). The other scenario also includes an Australian nuclear power plant by 2020.

Regardless of whether a carbon tax is set or not, nuclear power is too dangerous, too destructive, too divisive and too dirty to become part of Australia's energy future. Energy efficiency and renewables (with gas as a bridging fuel) are the technologies of the future.

9. Aren't nuclear weapons much less of a security threat than they were during the Cold War?

- Nuclear weapons are arguably more of a threat now than during the Cold War, as more countries have them and the international safeguards regime is weaker.

Since the Cold War, more states have secured nuclear weapons and more states are developing the capacity to produce nuclear weapons. More than 20 of the 60 countries with research or nuclear power reactors have undertaken covert nuclear weapons activities. Four or five countries have produced nuclear arsenals under cover of a 'peaceful' nuclear program – Israel, India, Pakistan, South Africa and possibly North Korea.

In recent years, the US and Australia have undermined the Nuclear Non-Proliferation Treaty (NPT). For example, the US recently signed a nuclear technology agreement with India and Australia indirectly sells uranium to Taiwan. Neither India nor Taiwan are parties to the NPT. The Director-General of the International Atomic Energy Agency, Dr. Mohamed El Baradei, acknowledged "vulnerabilities" in its "fairly limited" safeguards system and complained that the inspection system operates on a "shoestring budget" comparable to that of a "local police department". Yet Australia is entirely reliant on the IAEA to 'safeguard' uranium exports.

As the 2004 report of the UN Secretary-General's High Level Panel on Threats, Challenges and Change noted: "We are approaching a point at which the erosion of the non-proliferation regime could become irreversible and result in a cascade of proliferation." (http://www.un.org/secureworld).

The 'peaceful' nuclear power industry has produced sufficient plutonium to produce about 160,000 nuclear weapons, each with a yield similar to the bombs dropped on Hiroshima and Nagasaki. Australian uranium has resulted in the production of over 80 tonnes of plutonium – sufficient for more than 8,000 nuclear weapons (http://www.foe.org.au/index.htm).

Due to the policy of 'equivalence', the Australia Government cannot guarantee that Australian uranium exports do not end up in nuclear weapons. 'Equivalence' means that where exported Australian uranium is mixed in a process and loses its separate identity, an equivalent quantity of uranium should be reported as Australian. It's therefore possible that Australian uranium could end up in nuclear weapons, provided the importing country uses the same quantity of uranium for 'peaceful' nuclear power production.

10. Isn't this campaign too political for an organisation like The Wilderness Society?

- The Wilderness Society has a long and proud history of challenging public policy where it is damaging to the Australian environment.

The escalation of nuclear activities in Australia – be it more uranium mines, an expansion of existing mines, an enrichment industry, nuclear power, reprocessing and waste dumps – all put our environment at great risk. For all the above reasons, The Wilderness Society will fight the expansion of the nuclear industry in Australia. Our vision is for a nuclear-free Australia.

11. What is the Howard Government doing?

- The Howard Government is dragging Australia deeper into the global nuclear fuel cycle, with extremely limited public consultation or demonstrable public support.

The Prime Minister has been having discussions with US President Bush about the Global Nuclear Energy Partnership. If Australia were to join this Partnership, Australia would enrich uranium prior to export, and potentially lease fuel rods to other countries, bringing back the high level radioactive waste, for long term storage in Australia. The Global Nuclear Energy Partnership would turn Australia into an international nuclear waste dump.

The Howard Government is pushing for the expansion of uranium mining in Australia. In the first 10 years of the Government, only one new mine was approved: Beverley in South Australia. The Government wants to change this, and scale up uranium exports.

The Government has signed a nuclear agreement with China, and there are indications that the Government may be considering a nuclear agreement with India, contrary to the NPT.

The Prime Minister has established a nuclear inquiry, examining the full nuclear fuel cycle, including more mines, enrichment, fuel rod fabrication, reprocessing and nuclear power. The Prime Minister has publicly supported an enrichment industry in Australia, likening it to value-adding to wool exports. The main waste byproduct from enriched uranium is depleted uranium. The US used depleted uranium bombs in the Balkans, Afghanistan and Iraq.

In 2005, the Government passed a new law which is profoundly anti-democratic. The Act is exempt from judicial law – the first time this has happened since WWII. The act removes all rights of Australian people to challenge a decision to select a site for a Commonwealth nuclear waste dump.

12. What should the… government do?

- Disengage from the nuclear fuel cycle and develop a genuine response to global warming.

The government should free Australia from the risks and burdens of the nuclear power industry by closing down existing uranium mines. It should tackle the threat of global warming by protecting our bushland and forests from landclearing and logging, and by making energy efficiency and renewable technologies top national priorities. Innovation, energy security, jobs, export earnings and environmental protection could all be mutually assured.

13. What can I do to prevent this from happening?

Your members of Parliament (state and federal) urgently need to hear your concerns. Seek a meeting, write a letter, make a phone call asking them to do everything in their power to end uranium mining, prevent nuclear enrichment, nuclear waste dumps and nuclear power in Australia. Both Labor and Liberal politicians need to hear your views.

Turn overleaf for more information.

Contact your member of parliament.

Visit the following websites to find the contact details for your member of parliament.

National
http://www.aph.gov.au/house/members/index.htm

ACT
http://www.legassembly.act.gov.au/members/index.asp?assembly=6

NSW
http://www.parliament.nsw.gov.au/prod/parlment/members.nsf/V3Home

NT
http://www.nt.gov.au/lant/members/Members.shtml?OpenDatabase

QLD
http://www.parliament.qld.gov.au/view/legislativeAssembly/members.asp?area=members&LIndex=1&Subarea=members

SA
http://www.parliament.sa.gov.au/Internet/DesktopModules/memberlist.aspx

TAS
http://www.parliament.tas.gov.au/

VIC
http://www.parliament.vic.gov.au/mps.html

WA
http://www.parliament.wa.gov.au/web/newwebparl.nsf/iframewebpages/Members

Sign our online petition [https://www.wilderness.org.au/cyberactivist/petition/uranium_petition_may_06.php?] to John Howard and Kim Beazley – Say NO to uranium mining and a nuclear waste dump in Australia!