



WWF International

Avenue du Mont-Blanc
1196 Gland
Switzerland

Tel: +41 22 364 9111
Fax: +41 22 364 8307
www.panda.org

WWF POSITION STATEMENT NUCLEAR POWER

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WWF's mission is to stop the degradation of the planet's natural environment and to create a future in which humans can live in harmony with nature. We aim to accomplish this through preserving genetic, species and ecosystem diversity, ensuring that the use of natural resources is sustainable both now and in the longer term, and promoting action to reduce pollution and keep wasteful consumption of energy to a minimum. Therefore, WWF promotes the sustainable and efficient use of renewable resources in all industrial sectors.

Therefore, WWF promotes the sustainable and efficient use of renewable energy resources in all industrial, residential and transport sectors. Together with many other NGOs in the Climate Action Network WWF urges the increase of *new*¹ renewable energies to 20% of the global primary energy consumption by 2020 and to around 100% by 2080. WWF also calls on the implementation of serious energy efficiency measures to handle energy demand. That implies that the use of non-renewable energy resources such as fossil fuels and uranium have to eventually be reduced to zero – a phase out of fossil fuel and nuclear power.

In the face of growing energy-related problems such as global warming, acid rain and local air pollution nuclear power is being promoted by interested industries and certain governments as a clean source of energy which could help to reduce energy related human impact on the environment. WWF strongly opposes this view.

One of WWF's leading priorities is to accelerate the implementation of the solutions to combat global warming. Global warming is caused mainly by carbon dioxide (CO₂) emissions from the use of fossil fuels e.g. coal and oil in particular. Oil and coal burning are responsible for about 40 – 45% of global greenhouse gas emissions; all fossil fuels are about 55 – >60%. Solutions to energy-related problems such as global warming can only deliver long-term benefits if they reduce instead of merely displace humanity's demands on the environment.

As industrialised nations take on commitments to limit CO₂ emissions as required under the Climate Change Convention (Kyoto Protocol) and/or implement national legislation, some electricity industries (utilities and nuclear advocacy groups) and certain nuclear power producing countries have suggested that nuclear power is one of the central means to combat climate change. This lobby considers nuclear a key technology in achieving climate protection commitments. This is not, however, consistent with recent decisions in the global community. The finalised rules of the Kyoto Protocol exclude nuclear from the Clean Development Mechanism (CDM) and Joint Implementation (JI). This does not, however, have a direct impact on national decisions to run existing plants or install new nuclear facilities anywhere in the world.

WWF believes that the argument that the world should re-embrace nuclear power are seriously flawed. We are not alone in this judgment. In fact, there are many industrialised countries that do not engage in nuclear technologies at all. There are also more and more governments, such as

¹ *New* renewables refer to the following sustainable energies: All wind, solar, geothermal, and marine power, small hydro (<10 MW) in compliance with World Commission on Dams criteria and sustainable forms of biomass use excluding municipal waste incineration, peat and activities that lead to degradation/deforestation of land and in-door pollution.



Belgium, Germany and Sweden that have embarked on nuclear phase-out programmes. In yet other countries, there is a very strong debate about the future of nuclear.

Research commissioned by WWF and many other organisations on the status of nuclear power programmes and technological options for cutting back on CO₂ provides sound arguments for why nuclear is not the solution to global warming.

More specifically, WWF believes that nuclear power is not a sustainable source of energy, for the following reasons:

- The entire commercial chain of the processing of nuclear raw materials from nuclear mining; operating nuclear power stations; handling nuclear waste and finally re-processing, is full of leaks and contamination and produces a highly toxic legacy for thousands of years to come.
- The creation and handling of highly toxic nuclear products and the unsolved issue of safe storage of waste demonstrates the unsustainability of the technology.

Replacing fossil fuel fired power stations with nuclear energy simply replaces one fundamental environmental problem by another. It is clear that nuclear power remains particularly dangerous and difficult to control. This has been demonstrated by the accidents at Chernobyl, Russia, in 1986 and at Tokaimura, Japan, in 1999.

In addition to these inherent risks, one must also assess the primarily economic reasons that prevent nuclear from being a viable alternative to combat climate change:

- Investment into nuclear power projects can drain badly-needed funds from energy efficiency and renewable energy programmes, most of which have substantially lower specific greenhouse gas abatement costs than nuclear energy
- Nuclear technology does not create incentives for energy savings. It is a base-load technology whose energy output cannot be adjusted to specific consumer and industrial demand.

Nuclear power projects have a variety of negative systemic impacts. These factors can block innovation in the power supply sector and in demand side efficiency. They include:

- the need for inefficient large power grid systems;
- displacing activity in development of more efficient small-scale power supply and energy services;
- limiting employment opportunities to highly qualified staff in a very capital-intensive industrial sector. This is particularly important for the potential suitability of technologies under technology transfer and ODA activities.
- nuclear energy is more expensive compared to other energy supply options in most if not all cases. This is one of the main reasons why no new nuclear reactors – except one in Finland – are presently planned or under construction in the OECD until about 2010. Most of the power utilities that are highly reliant on nuclear either receive direct or indirect subsidies by the state (such as British Energy in the UK, EdF in France). In Russia nuclear reactors are state-owned and not part of a utility operating in free markets. Expansion of nuclear in many developing nations is often justified by the “hidden agenda” of some countries to fuel the access to military nuclear raw materials. By doing so, global expansion of nuclear energy is highly likely to breach or undermine compliance with the nuclear non-proliferation treaty.



- nuclear energy only produces electricity, but modern societies need a significant share of their energy in the form of heat (and cold). In a nuclear supply scenario, if heat demand is covered by usual fossil fuel fired boilers; nuclear power loses its greenhouse gas emission advantage over highly efficient natural gas-fired cogeneration plants and has significantly higher emissions than renewable biomass cogeneration plants. Cogeneration helps increase efficiencies by generating steam and electricity, often closer to where these utilities will be consumed. Nuclear power plants also have significantly higher emissions than renewable biomass cogeneration plants.

Conclusion

For the above reasons, WWF does not believe that nuclear power is the solution to global warming. In fact, WWF has a vision for the future which phases out the use of fossil fuel and nuclear in the share of energy use across the globe. This is possible and is necessary in order to ensure an environmentally sound, secure and peaceful future.