

Respondent Details

Name:	Environmentalists for Nuclear Energy (EfN)
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Consultation questions**1**

Do you agree or disagree that the level of the Waste Transfer Price should be subject to a Cap and that in return for setting a Cap the Government should charge a Risk Fee? What are your reasons?

Response

EfN agrees that the nuclear industry should be responsible for all waste products generated and the costs of treating and disposing of them. This is a fundamental requirement, which is not in dispute, to protect present and future generations.

The timescales over which the wastes and costs accumulate is so long that it is highly unlikely that any estimates made today will be anywhere close to the actual final costs which are likely to be significantly lower due to new technologies. Even worse, the proposed disposal mechanisms are not under the control of the nuclear industry and so the charges generated by a body such as the NDA could vary arbitrarily for commercial advantage.

The value of a cap on WTP is to contain unconstrained variability. The WTP is a parameter in establishing the payment rates and the cap should be agreed between the government and the industry after a thorough technical review by both parties.

At this point the legislation should have built in flexibility to vary the pricing and money set aside on a regular basis. A rolling 10 year review process should be included so the process becomes steadily better informed. This obviates the need for any Risk Premium, which is merely a form of taxation, as the risks are evaluated continually.

2

Do you agree or disagree that the Deferral Period should be set at 30 years after the start of electricity generation, in order to enable uncertainty over waste disposal costs to be reduced? What are your reasons?

Response

Given the uncertainties at this new beginning for nuclear power in the UK, thirty years seems the right period over which well informed decisions can be made.

3

Do you have any comments on the updated Waste Transfer Pricing Methodology? Comments are sought in particular on the proposed approach to setting an Expected Price and a Risk Fee.

Response

The pessimism and lack of confidence in radiation and nuclear material that

EfN disagrees with the whole basis of the Methodology which looks at only one solution, the deep disposal of Spent Fuel Rod Assemblies. This then requires the most elaborate technologies for the WDF and 95% of the material buried is not waste at all but fuel. The statement that:

“Geological disposal is internationally recognised as the preferred approach for the long-term management of higher activity radioactive waste.”

could be more accurately phrased as:

“Geological disposal is widely thought to be the preferred approach for the long-term management of higher activity radioactive waste, but China, France, India, Japan and Russia view Recycling of Spent Fuel as the best way to minimize waste and use valuable fuel resources.”

Areva is currently negotiating to build new Recycling plants in the USA and a replacement for the THORP plant. Areva was a technology partner in the newest recycling plant at Rokkasho, Japan.

The WTP Methodology is evaluated as if waste disposal for this generation of reactors is the final act for the nuclear industry. This isolated scenario will be very far from any reality by 2050 and is hardly a sensible basis for estimating costs in 2130.

The current Generation III PWR and BWR reactors are the final version of the very reliable 1970s nuclear technologies. Several of the Gen IV concepts and large scale Fusion will be available by 2050 and are entirely based on fuel recycling and will burn over 90% of their own radioactive wastes. They will not entirely replace the Gen III workhorse reactors. Nuclear power will be run for millenia and the processing and disposal of residual nuclear wastes will become an ongoing and continuously funded process this century.

Even the radioactive Fission Products which are really thought of as waste are just a less powerful fuel than fissile Uranium or Plutonium. Radiative capture of a neutron by fissile Uranium or Plutonium isotopes releases about 200 MeV by fission, a huge amount of energy per nucleus. Capture of a neutron by a long lived radioactive Fission fragment, like Technetium, produces about 10MeV as it is Transmuted into the stable platinoid metal, Ruthenium. A tonne of fissile Uranium has the energy equivalent of a million tonnes of coal and a tonne of Technetium, or other Fission fragments, has the equivalent of 50,000 t of coal. Small Fusion Reactors can be built by 2030 to burn Fission Wastes or Breed fresh reactor fuel from Depleted Uranium using the current level of successful Fusion technologies. Effective solutions to the nuclear waste problem are not a century away. Despite this, the UK Fusion Research programme is on declining funding and facing imminent layoffs of scientific staff.

Much of the large volume of Intermediate Level Wastes ,containing valuable materials from decommissioning a reactor, could be re-used in 300 years. This implies that they should be stored in National Reserves, not disposal facilities.

The emerging technologies for treatment of Radioactive Wastes run

	<p>far beyond the simple minded 'bury and forget' approach which is not environmentally friendly now or in the far future. Geological Disposal will be needed but on a very different scale than current ideas indicate. It is inappropriate to charge the new nuclear industry for a GDF facility to dispose of Magnox and AGR wastes produced during a very different, government operated nuclear programme. The GDF needed by future programmes will be of a different design, will use very different technologies and will be paid for by the industry.</p> <p>EfN believes that by ignoring emerging and future nuclear technologies the DECC approach to long term management of the nuclear industry is naive at best. Any legislation to manage the nuclear industry must recognise and plan for significant changes and improvements as well as demanding and ensuring its safe and clean operation. Our first point should be clear to the public that the nuclear industry will be responsible for all waste products generated and the costs of treating and disposing of them.</p> <p>The UK was a world leader in nuclear technology and is now just a customer, like United Arab Emirates or Chile. The nuclear energy story is far from over and the UK must relearn how to be an effective partner with the nuclear industry in the switch towards an all electric Britain, the primary carbon free source being Nuclear Power.</p> <p>EfN-UK is the UK branch of Environmentalists for Nuclear Energy with over 10,000 members world wide, accessible on www.ecolo.org. Bruno Comby is President and founder of EfN.</p>
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Please select the category below which best describes who you are responding on behalf of.

- ☐ Business representative organisation/trade body
- ☐ Central Government
- ☒ Charity or social enterprise
- ☐ Individual
- ☐ Large business (over 250 staff)
- ☐ Legal representative
- ☐ Local Government
- ☐ Medium business (50 to 250 staff)
- ☐ Small business (10 to 49 staff)
- ☐ Micro business (up to 9 staff)
- ☐ Trade union or staff association
- ☒ Other (please describe):